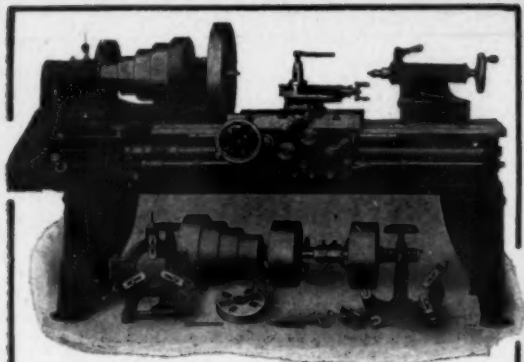


Issued Every Month  
For Free Distribution to Users  
of Machine Tools

# HITCHCOCK'S MACHINE TOOL LIST

A Reference Book for Buyers  
of Iron Working Machinery

Published by  
**A. H. Hitchcock**  
1220-1235 Caxton Building  
Chicago



## Champion Lathes

For Lathe Work will be a big factor in any shop from an economical standpoint.

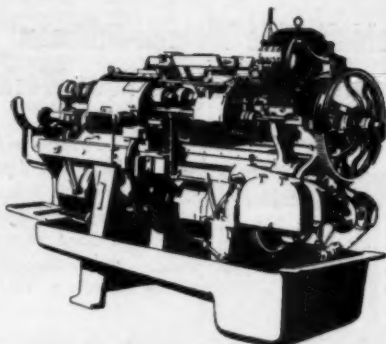
Don't make the common error of thinking any lathe will suffice, for it won't. Lathe Operations are one of the most important parts of any machine shop, and that part of your equipment should be of the best.

**Paying a High Price** doesn't always insure the best either, nor can you get the best for the least money.

If you'll send for our **Catalogue of 10, 12, 14, 16, and 18 inch Lathes, Quick Change or Standard**, we'll show you a lathe of unequalled capacity and at right prices.

**Champion Tool Works Co.**

2426 Spring Grove Ave.,  
Cincinnati, Ohio - U. S. A.



## **The Acme Automatic Multiple Spindle Screw Machine**

is fundamentally correct in design and is capable of producing first class parts at a rate of from 50 to 200% above other machines used for the same purpose.

### **The Method**

There are four spindles carrying stock. All the tools (eight or more if the job demands) move up to the work **once** and at the same time. They perform all the work on the piece during the time it takes for the longest operation. When the tools are drawn away **once** the piece drops off complete.

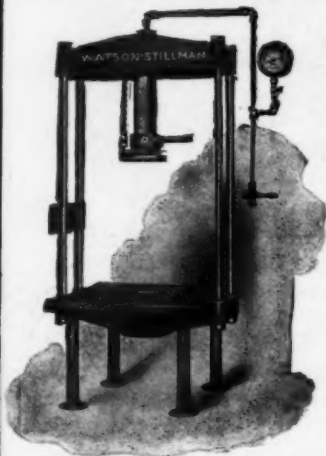
The Compactness, Convenience and Upkeep are in close consistency with the remarkable production which our customers are getting. "The Production of Duplicate Parts" booklet tells how.

---

**THE NATIONAL-ACME MFG. CO.**  
**CLEVELAND, OHIO**

**BRANCH OFFICES:** New York, Boston, Detroit,  
Chicago, Montreal, Atlanta.

## Wouldn't This Watson-Stillman Hydraulic Press Do Your Work?



Here is a mighty handy type of press for light work in any shop. Originally designed for automobile work, it has proven so satisfactory for taking off fly wheels, straightening crank-shafts, putting bushings into wheels, etc., that in this industry alone we have sold a large number.

Our designs of hydraulic presses cover a wide range of service, in fact, everything for which

an hydraulic press is practical. We have complete patterns for several hundred types and sizes, and for special requirements we can usually furnish a modification of some standard design. This saves time and money.

---

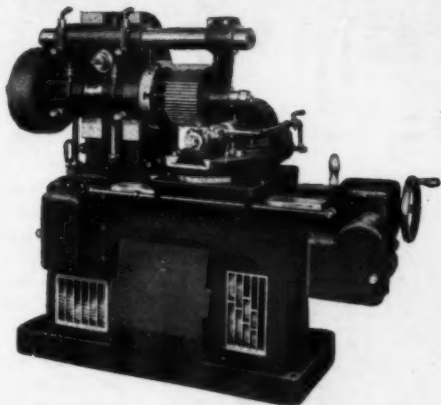
*Tell us what you need a press for and we will quote prices.*

---

**The Watson-Stillman Company**  
Church & Fulton Sts., New York

# **A Manufacturing Gear Hobbing Machine**

*To Make Accurate Gears of Uniform Size Faster and  
Cheaper. That is all it will do, but it will do just that.*

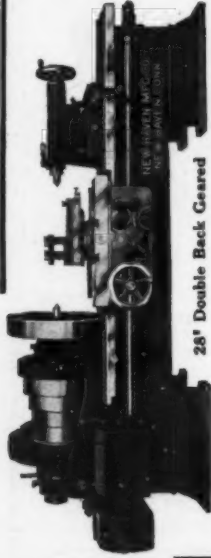


## **A New Type Gear Hobber**

for manufacturers requiring correctly generated spur and spiral gears, produced in quantities with great accuracy and uniformity. It is a rapid, economical machine, convenient in operation and adjustment, a striking example of simple, direct and effective design. Intended for modern shops employing only tools of the highest grade.

*Nothing cheap about it but the cost of its output*

**Barber-Colman Company**  
**Rockford, Illinois**



28" Double Back Geared

According to the Best  
Formula:

*First class materials;  
Modern methods, backed by  
An experience of 60 years;  
Improvements that improve.*

That's exactly how the

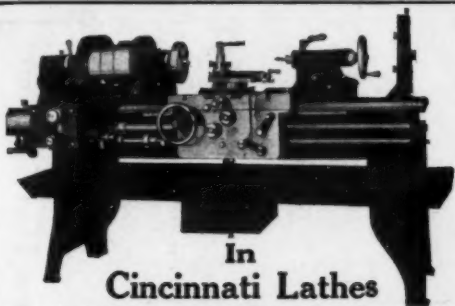
## New Haven Modern High-Power Lathes

are made, and that's why they always come up to expectations—often a little more.

In heavy service, in accuracy, in daily output, in all-around dependability, our line of standard and improved engine lathes yields first place to none. That's why every lathe we make, from 18-in. to 65-in. swing, is backed up with the New Haven Guaranty.

*You will find the price an agreeable surprise—quality considered*

**New Haven Manufacturing Co., - New Haven, Conn.**



## In Cincinnati Lathes

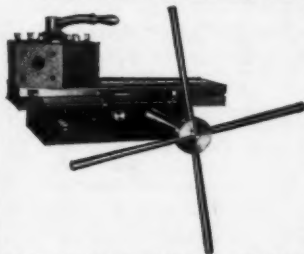
you receive that quality of material and workmanship upon which efficiency and accuracy depend. Buy them to be on the safe side. Our **double wall apron** gives support to both ends of all shafts and studs. All have a **chasing dial**, **automatic stop**, and many other conveniences insuring easy manipulation.

### The Cincinnati Lathe & Tool Company

2730-32 Spring Grove Avenue, : : : Cincinnati, Ohio

## Bed Turrets For Engine Lathes

Give You a Turret Machine at Small Cost



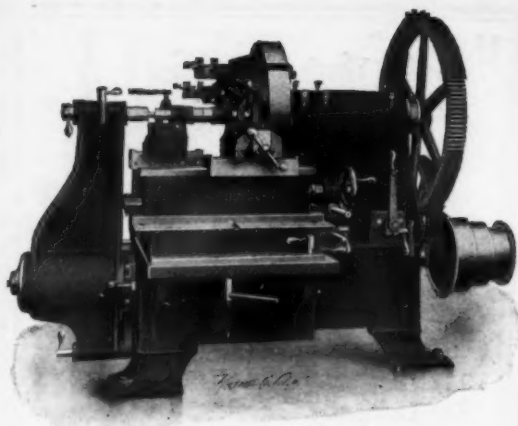
Many lathe manufacturers, realizing that our turrets have distinctive features which greatly increase their value, are equipping their lathes with them. We furnish them with hand or power feed, with or without automatic independent feed stops. All are automatic revolving, have either round or hexagon heads, and made to fit any make of engine lathe. Specializing in this line enables us to produce them at minimum cost.

Made in a variety of styles.

*Write today for interesting price and booklet.*

**FAY & SCOTT, - - - Dexter, Me.**

Manufacturers of Engine, Extension Gap, Chucking,  
Turret and Patternmakers' Lathes



## Nothing So Common As Pulleys About a Machine Shop or Factory

Many people buy fancy high-priced machines to take care of **occasional** fancy work.

### But Why Neglect The Common Old Every-Day Pulley?

Day in—day out—year in—year out you are at continual expense for them.

A cut in this cost counts up fast, because it's continuous and everlasting.

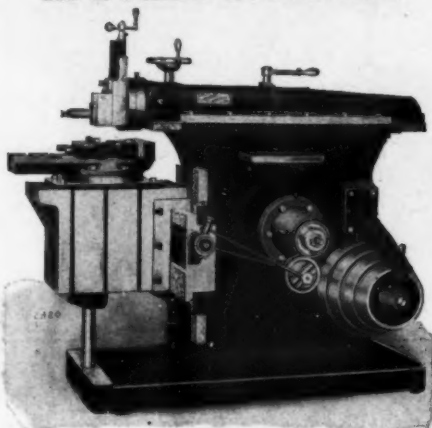
*Write us today*

**The Cincinnati Pulley Machinery Co.**  
Cincinnati, Ohio



# Heavy Duty Shaper Service

Requires a Tool built for the purpose,  
and in a manner that insures results



**24-inch, Back Geared**

THAT IS WHY YOU should buy a "Cincinnati" when in need of a shaper. We invite you to turn on your X-ray searchlight, and consider the power of this tool to take deep cuts, its rigidity to stand up under the heaviest work, and the generous margin of metal and strength that insures dependability under the severest strain.

The steady going, always-on-the-job habit of the "Cincinnati," coupled with its sure accuracy and many conveniences gives you a tool with maximum productive capacity. Other discriminating manufacturers looked it over carefully—and they bought. All we ask you to do is to just look it over—you'll do the rest.

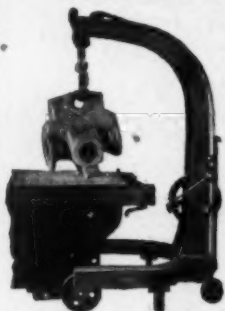
*Write us for our free Shaper Book. It throws  
a lot of light on the subject*

**The Cincinnati Shaper Co.**

Colerain Ave. and Elam St., CINCINNATI, OHIO

## Canton Portable Crane and Hoist

### "The Handiest Tool in the Shop"



A user says:

*"We would not be without that floor crane. Since we have had it, we do not use the overhead traveling crane or the chain blocks."*

And it's just as useful for light weights as heavy ones. Our own workmen never think of lifting anything by hand, the weights averaging only from 300 to 1,000 pounds. And it goes into any nook or crook.

Stiffest construction of iron and steel; roller bearing wheels; guaranteed tested chain, strongest made, by actual test.

*Free Trial?—Or Booklet?*

**CANTON FOUNDRY & MCHE. CO., Canton, O.**

## Electric and Hand Power Cranes

### Electric Hoists



Hook Suspension Hoists that can be hung up anywhere.

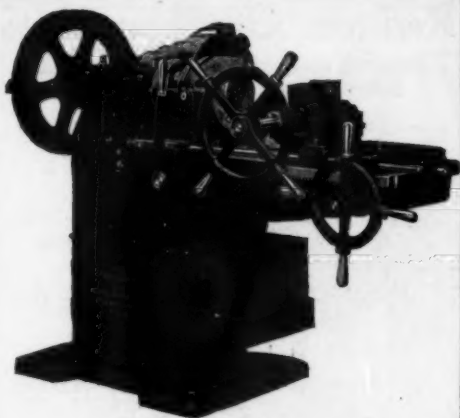
Trolley Hoists to run on any kind of track, hand or power travel. Can be operated from floor below or from a

cab attached to hoist or from any place in the building.

One man with an electric hoist replaces several men using hand power hoists.

The Electric Hoist will repay first cost in from 2 to 12 months.

**The Euclid Crane & Hoist Company**  
Euclid, Ohio



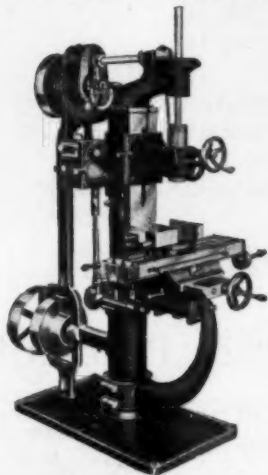
## Reliance Bolt Cutters

Built in sizes  $\frac{3}{4}$  inch to 6 inches, Single, Double and Triple, of the most up-to-date design. There is, also, a good reason why the "Reliance" is such a satisfactory machine for accuracy of threads cut, large production and low cost of maintenance, even in the hands of inexperienced labor. A lot of this reason is in the Opening Die Head, and we would like to tell you all about it. Interesting information for the asking.

**The Foote-Burt Co., Makers**  
Cleveland, Ohio

# Reducer Of Shop Costs

Scientific management endorses the No. 2  
Knight Milling and Drilling Machine



**A**ND THERE'S a good reason—many valuable minutes are clipped off the time heretofore needed on the thousand and one operations that make up a day's work in toolrooms and other departments of busy manufacturing plants. The No. 2 enables you to mill, bore and drill at almost any angle without resetting the work. It often does the work of two or more machines, reducing the time 20 to 50%. Send today for illustrated folders describing the No. 2, or the Nos. 1 and 1½, which are lighter machines of equal convenience.

**W. B. Knight Machinery Company**  
St. Louis, Mo.

# High-Speed Sensitive Drill

1 in. Drill, 1 in. Deep C. I., 8 Seconds

$\frac{1}{2}$  in. Drill, 1 in. Deep C. I., 3 Seconds

Belt Tightener,  
Mechanical  
Cone  
Belt Shifter.

Very Rigid

Wt. 480 lbs.

Powerful  
Convenient

All adjustments are  
made in front.

---

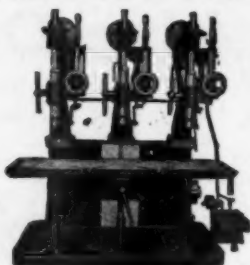
---

Reed Drill  
Company

Worcester, Mass.



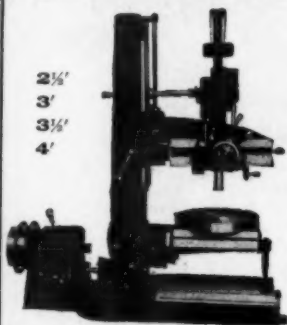
# Rockford Gangs



They not only drill, but they bore, ream, tap and face without removing work from jig.

*Write for descriptive matter*

**Rockford Drilling Machine Company**  
Rockford, Ill., U. S. A.



2½'

3'

3½'

4'

## One Lever

Controls all Spindle  
Movements in the

## Gang Radial

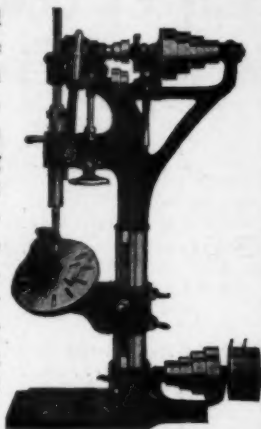
Mighty convenient, isn't it? Modern, too. And it's just as modern in its feed and speed changes, in its rigidity, simplicity, capacity and general all-around efficiency. It's a good drill to know about. The more you compare radials, the more the Gang Radial stands out as a practical tool that's worth buying.

*Write us for full description. Also ask for circular regarding our friction type head, style "G."*

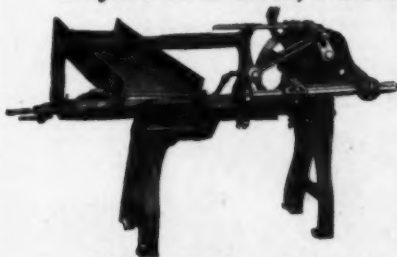
**The Wm. E. Gang Company**  
Cincinnati, Ohio

## The One Big Feature

You can drill holes at any angle at one setting, then duplicate at a 50% saving of time with our **Tilting Table**. Look at its heavy construction to stand up for rapid production with every convenience for the operator. Get our circulars and prices today.



### Royal Power Saws, 5 Sizes.



For all kinds of work. They excel for speed and accuracy.

*For Sale by the best dealers. Get Circulars.*

## FRONTIER IRON WORKS

Department A  
Letchworth & Grant Sreets,

Buffalo, N. Y.

## A Tool to Investigate Either a Drill or Tapper

When used as a drill, all tapping parts are idle. As a tapping machine, it reverses automatically *at both ends* of the stroke. The change for either drilling or tapping is made instantly.

**No. 51** weighs 550 lbs., drills  $\frac{3}{4}$  in., taps  $\frac{1}{2}$  in.

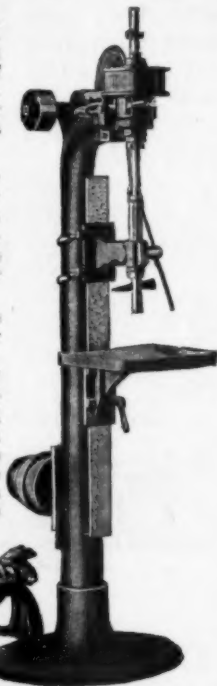
**No. 11** weighs 275 lbs., drills  $\frac{1}{2}$  in., taps  $\frac{3}{8}$  in.

**Style A** is adapted to style A. and style B. Barr multiple drills.

**Style E** is adapted to style E. and Style F. Barr multiple drills.

**ANY COMBINATION** that you require on our Multiple Drills arranged with our power feed and quick return to produce work economically—the latest and best methods of handling jig or fixture drilling or tapping.

We  
have  
a cir-  
cular  
for  
you



*What's your address? Ours is*

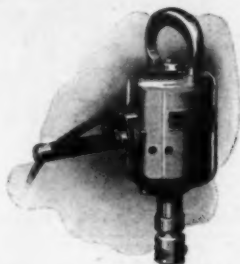
**H. G. Barr Drilling Machine Co.**

12 Hermon St., Worcester, Mass.



**"Hard Service"**  
Electrically Operated  
**Drills and Reamers**

Built in 6 sizes, scope 0-2 inches



Are you operating to the best advantage in drilling large and heavy parts? You could no doubt save money and time on others by taking a machine to your work instead of the work to the machine. **"Hard Service"** Drills and Reamers are the solution of the problem. Your **ultimate** machines if you want **maximum production at minimum cost.**

*Write for descriptive matter, information and prices.*

**The Van Dorn & Dutton Co.**

General Offices and Factories

**Cleveland**

New York - Chicago - Pittsburg - Detroit - San Francisco

## A 12 Inch Saw, \$100.

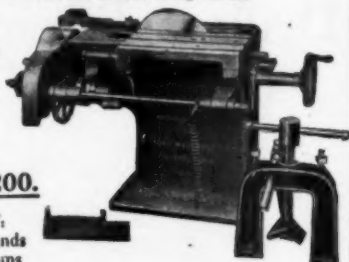
**Immediate Delivery**

**Screw Feed and Ball Bearing Thrust**

Cuts 3x5 or  
1-2x9 inch.  
Power Friction  
Feed.

Automatic  
Knockout.  
Large Clamp-  
ing Table.

**20 in., \$200.**

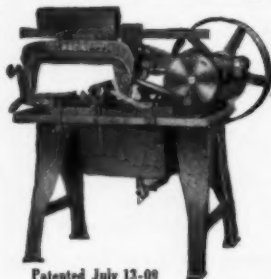


**CAPACITY:**  
5 3/8 Inch Rounds  
12 Inch I Beams

*Write for particulars*

**Burke Machine Co., Conneaut, Ohio**

## Racine High Speed



Patented July 13-09

### Metal Cutting Machines

Will Cut 6 inch Bar  
Machinery Steel  
in 28 Minutes.

Speed 125 R. P. M

*Write for Catalog*

*Address:*

**Racine Tool & Machine Company**  
Racine Junction, Wis.

Eastern Representative: Simplex Tool & Supply Co., Boston, Mass.

# Are You Satisfied?



With your present results in steel cutting? If you are, then you're not the man we are trying to interest. It's the man who is quick to recognize an improvement and take advantage of it--whom we want to reach and get acquainted with our **ELASTIC WHEEL METAL CUTTING MACHINE.** For cutting steel, iron, brass or copper tubing and pipe up to 3 in. dia. or solid pieces up to  $\frac{1}{2}$  in. dia., soft or hard steel, any shape, it's the quickest little machine we know of.

One of its most important advantages:

The material to be cut (any shape) is clamped or may be held by hand, and remains in a fixed position in the **V work-shoe.** This will be found to be a far more practical method than that of moving the stock to make the cut. The **Elastic Grinding**

Wheel is swung forward to take the cut, by either the right or left hand or foot, handles and treadles being provided. After the cut is taken, the wheel upright, which is pivoted at its base, is returned to a stop by means of a spring attached to the treadle.

We equip this machine with a 12x3-32 in. elastic cutting wheel (which never requires sharpening) a countershaft and a light stock support.

With such an equipment, you will be surprised at the saving in Time, Labor and Material.

It is low in price for so valuable a machine, as a trial will show. Try one and see!

*Our address is*

## **Nutter & Barnes Company**

Specialists in Cutting-Off Machinery

**Boston, Mass.**

**What's Yours?**

# FREE



You Can Have One  
**FREE**  
Read The Offer  
Opposite

21-64  
upon  
busin  
foll

This

104,00  
purch  
from  
sume  
for le

V  
when  
prove  
tome  
than  
profit

Our

TH

# FREE

One Jacobs Improved Drill Chuck, No. 2, having 21-64-inch capacity, will be sent free to your address upon receipt of a letter from you, written on your business stationery, making positive statements as follows—

1. That you are in the machinery business for yourself;
2. That you use in your shop or factory as many as four drill chucks;
3. That you do not use Jacobs Improved Drill Chuck;
4. That you saw this offer in the May issue of Hitchcock's Machine Tool List—

This offer is positively only good until July 1, 1911.

## This Is Not A "Gold Brick" Offer

It means dollars and cents to you. More than 104,000 Jacobs Improved Drill Chucks have been purchased from us. More than 1,800 were purchased from us during the month of March, 1911. A Consumer never purchased one of these Chucks from us for less than \$3.85.

Why do we make this offer? Because we know when you learn the true value of the Jacobs Improved Chuck, you will be one of our satisfied customers. A satisfied customer is of more value to us than a Drill Chuck. Therefore, we will make a profitable investment, and SO WILL YOU.

*Our new 34-page illustrated catalogue, showing half-tone illustrations, actual size, of the ten different sizes and forms of the Jacobs Improved Drill Chuck, will be sent to you free upon request.*

**The Jacobs Manufacturing Co.**  
Hartford, Connecticut

# The Morse "Rarefied" Dust Collector

## Is Built on the Right Principle Because Nature Abhors a Vacuum

And if there's anything Nature dislikes next to a vacuum, it's rarefied air, which is simply a partial vacuum.

The Morse Collector is located between the source of dust supply and fan, so that the air is *pulled* or *drawn* into the collector—*not forced*. The fan creates a suction—on the partial vacuum principle—which draws the flying dust into the collector and cleans the air as thoroughly as a suction sweeper cleans a rug or carpet.

There is no abrasion of fan parts, because the dust never reaches the fan. All particles heavier than air are arrested in the collector and discharged automatically.

For  
Emery Wheels, Polishers, etc.

Ask for Booklet.

The Knickerbocker Co.,  
Jackson, Mich.



# **A Free Book**

# **On Gas Engines**

## **From the Buyer's Angle**

Our Bulletin 22, "*Efficient Gas Power*," contains 48 pages of mighty plain talk, with over 30 illustrations and tables. It is a treatise—not an advertisement.

It tells you what to expect from good gas power, so that you may first determine whether you really want a gas engine or not.

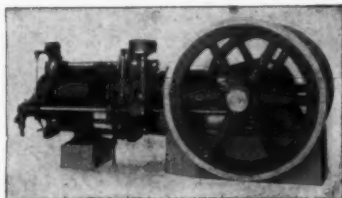
Then it tells you how to compare gas engines, so that you may select the one best suited to your own peculiar needs; and then, how to prove that you get what you buy.

No matter what make of engine you prefer, after a careful reading of "*Efficient Gas Power*," you will have a clearer idea of what you want to do and how to do it.

*Just ask for Bulletin 22. It's free.*

**The Elyria Gas Power Co.**  
**Elyria, Ohio**

20  
to  
200  
H.  
P.



20  
to  
200  
H.  
P.

**"THE LITTLE BIG ENGINE"**

There are several tapping operations which you are now doing with solid taps on your Drill Press or Turret Lathe where

## **Geometric Collapsing Taps**

would do the work better, and in half the time.



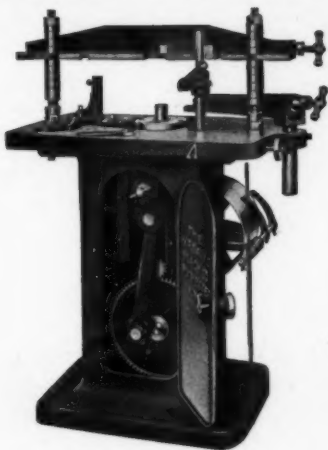
**Geometric Collapsing Taps** are as rigid as solid taps while cutting, but collapse their chasers automatically at the end of the cut, and there's no reversing required to back them out.

*We will be glad to tell you more  
about them, if you will tell  
us your requirements*

**The Geometric Tool Co.**  
New Haven, Conn., U. S. A.



# Accurate Machine Tools



## **Davis Keyseater**

**Made in two sizes**

Suitable for internal keyseating in pulleys, gears, etc.

A simple, well made tool, giving a large output at a small cost.

No expert operator required.

Orders can be sent to us direct or through leading machinery dealers in all parts of the world.

*For further particulars address*

## **The W. P. Davis Machine Co.**

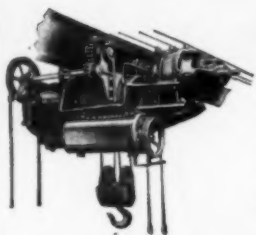
**Rochester, New York, U. S. A.**

## Why Be Downhearted

when our

## Hoists

will help you to  
make money.



Hoists, Trolleys,  
Cranes, Derricks,  
Hoisters and Buckets

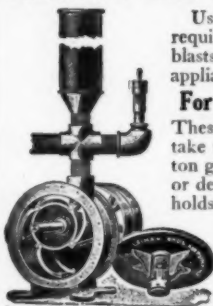
**Victor R. Browning & Co.**  
Cleveland, Ohio

## Leiman Bros. Positive High Pressure Blowers and Vacuum Pumps

Used wherever a blast of air is required; for furnaces, forges, sand blasts, blow pipes; all gas and oil appliances; gas producers.

### For Vacuum Cleaning Outfits

These are the only machines that take up their own wear; small piston gives big air space; no springs or delicate parts; centrifugal force holds wings against cylinder; noiseless; slow speeds.



8 SIZES \$17 UP  
For All Purposes

Send for catalog No. 26 for Blowers,  
No. 27 for Vacuum Pumps

**LEIMAN BROS., 62 R John St., New York**

# If Your Wife Found Out How You Were Wasting Twist Drills *What Then?*

A MAN stood up on his hind legs and howled when his wife sold his old trousers for a quarter. They had a five dollar bill in them—and he knew it.

But he didn't say a word about the tens and twenties that his workmen were scrapping every year, because *he didn't know*.

We found one company that *didn't know* they were annually scrapping a thousand dollars worth of twist drills that were good in every way except for missing tangs or broken shanks. They *know now*, and they don't do it any more. They use

## "USE-EM-UP" Drill Sockets

Made in all sizes  
and combinations

*See that flat?*



NOW they just grind a flat on what's left of the shanks, which takes about two minutes, slip them into the sockets and *use 'em up*. They also buy their new drills already fitted for this socket: any maker will furnish them without extra cost.

*We will send you a trial lot, express prepaid. If they don't suit, send them back, express collect. WHAT SIZES?*

**American Specialty Company**  
Chicago, Ill.



HIGH DUTY  
**ROCKFORD**  
PUNCH PRESSES

## POINTS THAT COUNT

**Straight Line Frame** with plenty of metal distributed where it will do the most good.

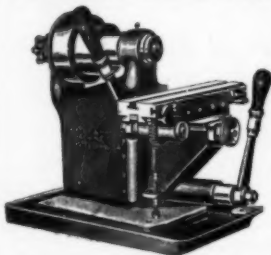
**Large Shaft** to stand the heavy strains put upon it.

**Large Bearing** area to insure long service.

*Other advantages sent on request*

**Rockford Iron Works**  
Rockford, Illinois

## What! Another Order?



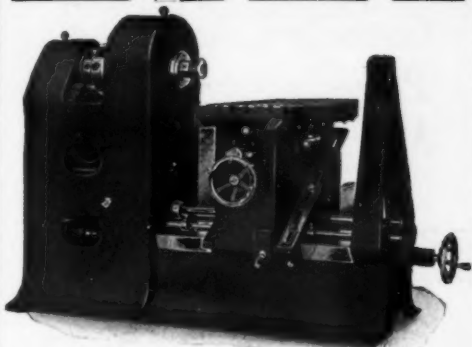
Yes, and actually from our next door neighbor. No, we didn't have to bribe him. He came, He saw, He ordered this machine, and he's satisfied.

*Send for circular*

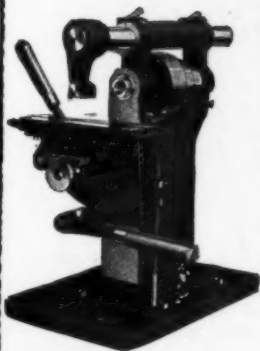
**The Carter & Hakes Co.**  
West Winsted, Conn., U. S. A.

AGENTS—Marshall & Huschart Mehry. Co., Chicago, St. Louis, Indianapolis; Motch & Merryweather Mehry. Co., Cleveland, Detroit, Cincinnati, Pittsburg; Henshaw, Bulkley & Co., San Francisco, Los Angeles, Oakland, Cal.

## Facing and Boring Mill



**Weight, 4,500 lbs. Price, \$700.**



## **Bench Miller**

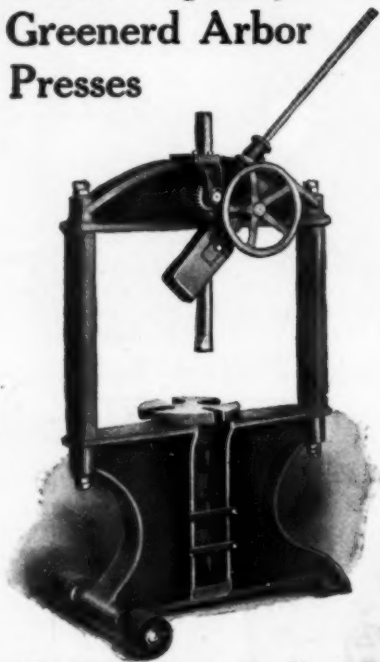
### **A Seasoned Tool**

The tool to buy if you want extreme accuracy and permanent alignment five years hence as well as now. In making this miller the greatest care is taken thoroughly to season all castings both before and after machining. We carry these frames and parts from six to eight months after work begins on them before the final finishing is done. The result is a tool that is accurate and will stay accurate as long as you use it. For precision work it has no equal.

Longitudinal feed, 6 in.;  
transverse feed,  $3\frac{1}{2}$  in.;  
vertical motion of knee, 8 $\frac{1}{2}$  in.;  
table surface,  $3\frac{1}{2}$  x 12 inch.

**Burke Machine Co., Conneaut, Ohio**

# Extra Capacity Greenerd Arbor Presses



**No. 15, same power as the No. 5 Press**

36 inches between uprights

26 inches over the plate

Glad to send full description

*All dealers sell them*

**E. E. Bartlett, 336 A St., Boston**

# Rapid Screw Slotting

Only One Handling of Screws  
Light, Rapid and Convenient

Made in  
Two Sizes



Sent on  
Approval

Price—  
Fifty Dollars  
f. o. b., N. Y.

Garvin No. 1 Rapid Screw Slotter—Capacity  $\frac{1}{8}$  to  $\frac{1}{2}$  in. Screws  
*Send for circular No. 140*

**IMMEDIATE DELIVERY**

Manufactured By

**THE GARVIN MACHINE COMPANY**

Spring and Varick Sts., New York City

# What method of speed control do you use on the machines in your plant?

## Is it Simple, Convenient, Accurate and Efficient?

If it is not all of these your machines are not turning out the work they should.

A simple method eliminates chances of trouble. A convenient method encourages operators to make proper speed adjustments as often as the work demands.

An accurate method makes possible the running of all machines at the exact speed necessary to produce the quickest results on each operation.

An efficient method wastes no power.

# Reliance Adjustable

## Engineering Service

If you have work on which you think motors could be used to advantage let our Engineers investigate your needs. Whether it is one machine or an entire plant we will gladly suggest a method of applying Reliance Motors to get the best results. This service is free.



We can also furnish Reliance Constant Speed Motors for either alternating or direct current service.

Write today for our Folder 10-L. It will interest you.

of the armature shunting type efficient, accurate and efficient. The conditions are frequently changing to the limit at all times.

A Reliance Adjustable Speed motor. The method inside the motor. No

The hand wheel for speed control that every change in material can be made accurately by a corresponding change.

Greater ranges are possible running speeds within the range of

With Reliance Motors the needed and heavy overloads can be obtained without current loss or overheating.

## Reliance Electric

150 Ivanhoe

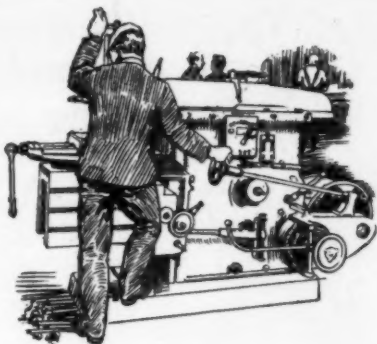


Control to you  
your plant?

Efficient?

at the work they should.  
A convenient method  
as soon as the work

of all machines at the  
each operation.



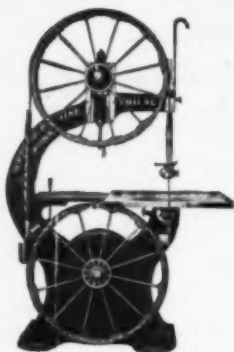
## Adjustable Speed Motors

These motors offer a method of speed control which is simple, convenient and efficient. They are ideal for machines on which the working speed is frequently changing. With these motors you can work each machine up or down at all times.

A Reliance Adjustable Speed Motor is just as simple to install and operate as a standard speed motor. The speed changes are obtained by a simple mechanical device on the motor. No electrical controller—no complicated wiring needed. A hand wheel for speed control can be placed convenient to the operator so that when the material or the character of the work can be met easily and by a corresponding change of speed.

Greater range is possible with the Reliance method than with any other. The speed range of the motor is unlimited. There are no steps—no jumps. With Reliance Motors the power is delivered right at the machine where heavy loads can be carried for short periods. The right speed without loss can be obtained for every operation on all kinds of work.

**Reliance Electric & Engineering Co.**  
150 Ivanhoe Road, Cleveland, Ohio



## A Complete Line

of modern Machinery for Pattern Shops, and all wood working plants.

*See our line  
before buying*

**Superior Machine Wks. Co.**  
1726 Dickson St., Chicago, Ill.

## Single End Buff Lathes D. & W. Wrenches



Single end lathes are time savers, as one man does not hold up another while changing wheels. Our lathes are built for heavy and light work. The spindle is  $1\frac{1}{2}$  in. diameter; boxes are grooved to fit, and babbitted.

### The D. & W. Wrench

Will do the work of 6 S. wrenches and a monkey wrench combined. Just the thing for the shop or auto.

We also make blanking and clipping dies. Send samples of the work you want and get our prices.

**The Doolittle & Whitehead Company**  
Wallingford, Conn.

# Special Wood Working Tools

## For Pattern Shops

Machines selected for their precision, and adjustability. Built like machine tools, and designed primarily for pattern shop service.

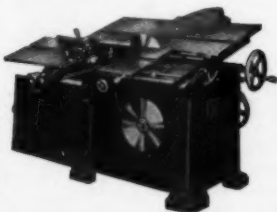
### "West Side" Band Saw

Steel wheels, which can neither break, warp, twist or spring; under cut hubs; self-oiling bearings; brass-bushed loose pulley; tilting table; all adjustments made by operator without leaving his position. A band saw widely known for its superiority of design and construction.



### Tannewitz Universal Double Saw Arbor

The last word in saw tables for accuracy and convenience. Gauges and adjustments for every possible requirement. A notable improvement upon a type of saw table conceded to be indispensable in every pattern shop.



### Porter 20-Inch Jointer

The highest grade jointer or hand planer in market. Patented guard and safety cylinder; specially grooved tables.

We outfit pattern shops complete, guaranteeing the accuracy and efficiency of every tool. Whether you want a full equipment or a single machine, you will find our service helpful.

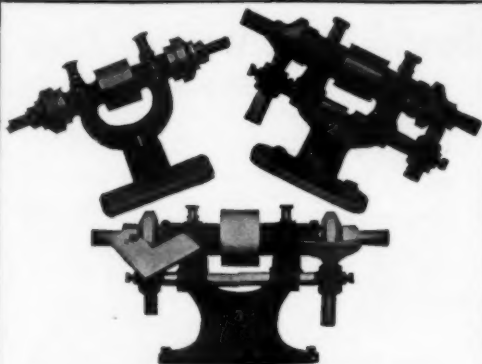
*We shall be pleased to have you consult us*

## Chicago Machinery Exchange

Manufacturers' Exclusive Representatives

1219-1227 W. Washington Blvd., Chicago

Can furnish used machines, if desired, carefully rebuilt in our own shops and fully guaranteed.



## Partridge Emery Grinders

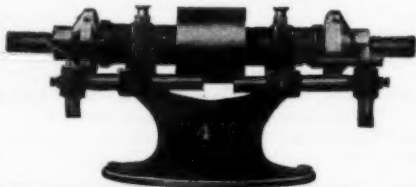
Here are four well-made Bench Grinders, adapted to light, medium and heavy work. Also furnished mounted on column. In addition, I make a high-grade heavy Floor Grinder of the cabinet type, thus being able to meet all demands for this class of tools. They are all well built, of the right materials, and have features of excellence that will interest you.

*Tell me your needs in this line, and I will gladly mail full description and quote interesting price*

**E. O. PARTRIDGE**

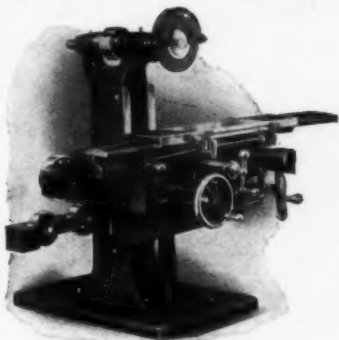
2047-9 Lake Street, - - - CHICAGO

Also Foot Presses and Tapping Machines



# Save Money And Raise Quality!

A small investment in this Wilmarth & Morman  
surface grinder does the trick for much  
light milling and planing work



DIES? Why, this machine just eats them up if you wish, or it will take off only one-quarter of a thousandth. It does what you want to do, when you want to do it, and does it right.

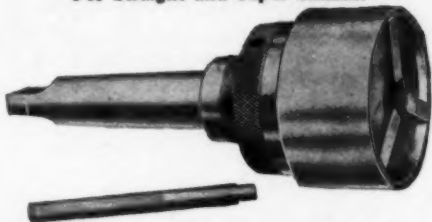
Just say "give information regarding surface grinders" and it will put you in touch with a money saving proposition. We build other sizes, including hand feed machines.

Surface Grinders—Drill Grinders—Cutter and Reamer Grinders—Lathe Center Grinders—Wet Tool Grinders.

*Complete Catalog Free*

**Wilmarth & Morman Co.**  
575 Canal St., Grand Rapids, Mich.

Five Main Features Distinguish The  
**A-C Combination Drill Chuck**  
 For Straight and Taper Shanks.



**Simplicity**  
**Durability**

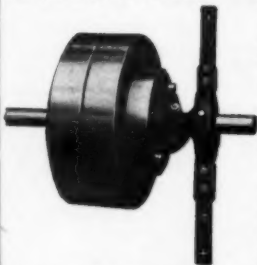
**Grip**

**Strength**  
**Accuracy**

*Replaces a full set of taper sockets. Guaranteed not to slip.*

**The Adjustable Collet Co.**  
 213 High Ave., Cleveland, Ohio

**EDGEMONT**  
**FRICTION CLUTCHES**



Cut shows our extended sleeve type suitable for mounting wood, iron or steel Pulleys, Gears or Sprockets on the hub.

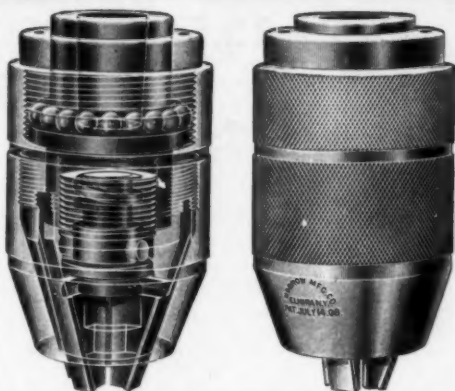
We also make this clutch **SPLIT** so that it can be applied to any line shaft without taking it down or disturbing any other pulley.

Our **Counter-Shaft Clutches** have been adopted by over 30 machine tool builders. We make special clutches for all purposes, so if you need a

clutch for any purpose, tell us your wants, for we make a clutch to suit your needs.

*Write today for catalog.*

**The Edgemont Machine Co.,** Ft. of Mound Street,  
 DAYTON, O.



## The Drill Chuck For Economy *The Morrow*

Strength, accuracy, convenience and economy were never better exemplified than in the Morrow Ball Bearing, hand operated drill chuck, for holding straight shank drills. The latest and best principles in design and construction are embodied in the **Morrow**. It must be remembered that the Morrow Chucks avoid the use of key or wrench necessary to operate old style drill chucks. It won't cost you anything to let us tell you **Definitely** just what our chucks are doing, and what they will do for you.

**Made in five sizes**

*Send for Catalogue*

**Morrow Manufacturing Co.**  
Elmira, New York.



# 19,500

of these pieces can be riveted in ten hours on a

## Grant Noiseless Rotary Riveter



with a Boy or Girl operator at a cost of not over \$1.00 per day.

The machine is absolutely **Noiseless** in operation, spins a highly polished head on the rivet shank without in any way marring the finished surface of the article being riveted.

We invite you to send us samples of your work, that we may rivet and return them to you for your inspection.

*Our 1911 catalogue will be sent to those interested, on request*

**The Grant Mfg. & Machine Co.**  
C. E. Station, Bridgeport, Conn.

## The Oil Saved Pays All!

To buy a Curtis Oil Extractor is not an expense, because it lowers your oil bill at once



No. 400—Capacity: 2 Bushels

And when it has paid for itself it continues to save you oil—money—and long before a year has passed the amount saved will make a noticeable impression on the right side of the ledger. Inexpensive to install, it is a simple, strong machine that requires but little power. Can furnish a steam attachment for cleaning waste. Three sizes.

*Prices and other information on request—write us today*

**Curtis Oil Extractor Company**  
95 Foster St., Worcester, Mass.





# JUNK

Men do not get the caps  
Of Tucker's Positive Lock  
Compression Grease Cups  
They Won't Jar Off

For Automobiles and all  
kinds of machinery having ex-  
cessive vibration. Sample sent  
by mail on receipt of cash, check  
or money order.

Made in three sizes

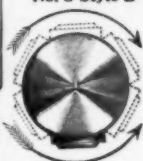
		Price
No. 000	$\frac{3}{8}$ in. $\frac{1}{2}$ in. pipe	\$0.30
No. 00	$\frac{1}{2}$ in. $\frac{3}{4}$ in. pipe	0.40
No. 0	$\frac{3}{4}$ in. $\frac{1}{2}$ in. pipe	0.50

PATENTED JANUARY 11, 1910

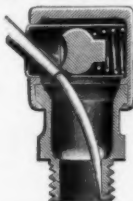
## Tucker's Oil Hole Covers



No. 5 Style B



Self Closing



Style C, Self Closing

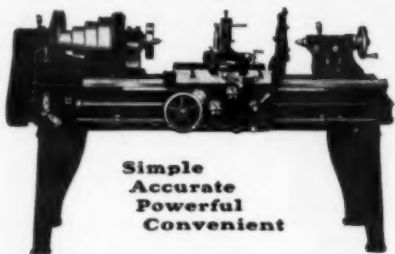
Note the indent of ball valve on styles B & C



Send for Catalogue of full line of Covers for  
all kinds of machinery having oil holes

**W. C. & F. C. Tucker,** Hartford, Conn.

## Standard Engine Lathes



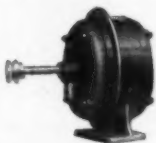
**Simple  
Accurate  
Powerful  
Convenient**

Furnished with either standard cone or with 3-step cone double-back-geared, **carrying a wide belt**, with 18 spindle speeds and wide feed range.

**GREAVES, KLUSMAN & CO.**

Cincinnati, Ohio, U. S. A.

## Do You Use Small Motors?



**For Horizontal or  
Vertical Service**

**W**E have a few high grade small motors of standard make— $\frac{1}{8}$  and  $\frac{1}{4}$  h. p.—Alternating and Direct Current. Some are new and some have seen a few hours service—All are guaranteed to be in first class condition. Will sell them singly at 1,000 lot prices.

Address Dep't. E.

**The Hoover Suction Sweeper Co.**  
New Berlin, Ohio

# **Don't Waste Your Efforts In A Small Factory**

Don't worry with the mechanical problems and waste your time, capital, energy and gray matter in building and operating a small plant, when you can use them to better advantage in hustling for orders. You will find it much more profitable if

## **You Get The Customers And Let Us Make Your Machines**

We can build them under a liberal contract that will insure you high-grade, dependable machines, a cost as low as you can get in a shop of your own, and entire freedom from the annoyance and possible loss involved in a manufacturing plant. Such an arrangement will make money for you, because it will enable you to give undivided attention to selling. Our facilities, our organization and our long experience will put the manufacturing end of your proposition on a par with the best, anywhere.

**Get in touch with us**

**We can't hurt you; we may help you**

**Our address is Fitchburg, Mass.; what is yours?**

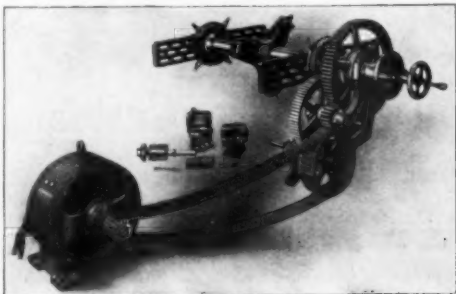
**C. H. Cowdrey Machine Works**

**Manufacturers of Machinery on Contract; Specialists  
in cost and time saving.**

# Portable Boring Bars

## Are Invaluable For Quick Repairs

The time saved by our portable bars on one job, frequently more than pays for the tool. In many cases repairs are effected in the time ordinarily needed to disconnect the parts.



**Portable Boring Bar, Driven with Motor and Silent Chain.**

**BORING CYLINDERS IN PLACE** is this machine's specialty. It has fixtures for boring in any position, and it very cramped places, being readily operated in a space which allows the taking of the piston out of the cylinder. It is also adapted for the boring of all kinds of engines, pumps, air compressors, steam hammers, valve seats, etc. Driven either by hand or power, it does as accurate work as can be done in any machine shop.

*Write today for our comprehensive catalog of  
Portable tools; they are standard*

**H. B. Underwood & Company**  
1022 Buttonwood St., Philadelphia, Pa.

Lists of  
under this  
with a me  
the name  
Prices an  
parties of  
slip inclos

**The Nat**

One No. 6

**P. A. M**

Cutter and  
Lathe, 45  
Planer, 27  
Planer, 36  
Turret lat  
Turret lat  
"Near m  
"Good"

**The Dan**

No. 5 Ajax

2 Atlas 60

2 Standard

6 Steam-h

Write for

15 No. 3, r

12 Stand

**The Rand**

Horiz. tub

Fire box, f

Vertical, fr

Corliss, fro

Automatic

Throttling

PU

60 in. Steve

Heaters, ta

Write for

Sole manu

## Second-Hand Machinery.

Lists of second-hand machinery, either for sale or wanted, will be published under this heading at the rate of **40 cents a line**, across the page, each issue, with a minimum charge of **\$4.00**. Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for. Prices and full descriptions of the machines listed will be furnished by the parties offering them for sale. If you do not find what you require, use the slip inclosed with each book to make known your wants to the publisher.

### FOR SALE BY

**The National-Acme Mfg. Co.,**

**Cleveland, Ohio**

#### PORTABLE HOIST.

One No. 6 Hercules portable hoist, one ton capacity.

### FOR SALE BY

**McCabe Machine Co.,**

**P. A. McCabe, Pres.,**

**95 Liberty St., New York City**

Cutter and reamer grinder, all attachments, Becker, near new.

Lathe, 45x16 ft. triple geared, extra heavy, New Haven, near new.

Planer, 27x8 ft., latest pattern, Woodward & Powell, near new.

Planer, 36x12 ft., two heads, Powell, good.

Turret lathe, 2x24 in. with die head, Jones & Lamson, good.

Turret lathe, 2½ in. hole, 18 in. swing, pan bed, oil pump, Dreses, near new.

"Near new" indicates condition practically good as ever.

"Good" indicates first-class condition.

### FOR SALE BY

**The Damascus Brake Beam Co.,**

**Cleveland, Ohio**

#### BULLDOZER.

No. 5 Ajax, double geared, steel gears, belt drive; weight 18,000 lbs.

#### BOILERS.

2 Atlas 60 h. p., 54x14, class M; with trimmings.

#### TANKS.

2 Standard oil car, 76 in. diameter, 25 ft. 6 in. long, 6,000 gallon; with coils.

#### INTENSIFIERS.

6 Steam-hydraulic. Send for blue prints.

#### INDUSTRIAL CARS—SHOP DUMP BUGGIES.

Write for blue prints and specifications.

#### DRAWING TABLES, ETC.

15 No. 3, made by Economy Drawing Table Co.

12 Standard wood tee squares.

### FOR SALE BY

**The Randle Machinery Co.,**

**1739 Powers St., Cincinnati, O.**

#### BOILERS.

Horiz. tubular, from 6 to 150 h. p.

Fire box, from 8 to 80 h. p.

Vertical, from 3 to 50 h. p.

#### ENGINES.

Corliss, from 50 to 350 h. p.

Automatic, from 150 to 180 h. p.

Throttling, from 5 to 150 h. p.

#### PULLEY LATHE.

60 in. Stevens.

#### BLOWERS.

Nos. 2 and 4 Roots.

#### ENGINE LATHE.

15 in. x6 ft. LeBlond.

#### PLANER.

42x16 Bement-Daugherty.

#### AIR COMPRESSOR.

8x6x9 locomotive type.

#### MISCELLANEOUS.

Heaters, tanks, pumps, exhausters, blowers, saw mill and general machinery.

Write for list. Also a full assortment of new machinery.

Sole manufacturers of the celebrated "Leader" Injectors and Jet Pumps.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The H. A. Stocker Machinery Co., 566-72 W. Randolph St., Chicago  
610 Merrill Building, Milwaukee, Wis.**

Something in this List ought to interest you. Let us know what it is.

#### LATHES.

- |                                        |                                       |
|----------------------------------------|---------------------------------------|
| 10x54 Davis (new, but reduced price).  | 17x6 Economic, compound rest.         |
| 12x6 Davis (new, but reduced price).   | 18x8 Economic, compound rest.         |
| 14x6 Hamilton, compound rest.          | 18x8 Lodge & Davis, c. r. and taper.  |
| 14x6 LeBlond, good order.              | 18x8 Springfield, c. r. and taper.    |
| 15x6 Von Wyck, c. r. and chuck.        | 20x12 Greaves & Klusman, comp.        |
| 15x5 Star, chuck fitted.               | rest, turret on shears, chuck fitted. |
| 16x6 Bradford compound rest.           | 21x10 Bradford, comp. rest, taper     |
| 16x6 Davis c. r. (new, reduced price.) | attachment, fine order.               |
| 16x6 Davis c. r. and tap., reduced pr. | 26x16 Putnam, 3 in. raising blocks.   |
| 16x8 Bradford q. c. g. comp., rest,    | 32x16 Davis, double back gears        |
| taper att., draw in spld. and collets, | (new, reduced in price).              |
| chuck fitted, good as new.             | 48x20 New Haven, tr. gd. (low price). |

#### SHAPERS.

- |                                     |                                 |
|-------------------------------------|---------------------------------|
| 12 in. Walcott, crank, good order.  | 20 in. Cincinnati, back geared. |
| 16 in. Gould & Eberhardt, b. g.     | 22 in. Walcott, triple geared.  |
| 16 in. Queen City, new, reduced pr. | 24 in. Hendy, triple geared.    |

#### PLANERS.

- |                                       |                                         |
|---------------------------------------|-----------------------------------------|
| 72x72x14 Niles, 4 hds, A-1 condition. | 30x30x12 Belmer, 2 heads.               |
| 48x48x20 Belmer, 4 heads.             | 30x30x10 Flather, 3 heads.              |
| 44x44x12 Pond, 2 heads.               | 26x26x8 Whitcomb (new, reduced pr.)     |
| 36x36x12 Gray, 2 heads.               | 20x20x5 Hendy, single head.             |
| 36x36x14 Belmer, 2 heads.             | 40x38x14 Putnam, old style, low pr.     |
| 36x36x10 Gray, 2 heads.               | 36x30x12 Sellers, old style, low price. |
| 32x32x10 Gray, 2 heads.               | 22x22x4 New Haven, low price.           |
| 32x32x12 Ohio, 2 heads.               |                                         |

#### MILLING MACHINES.

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| No. 6 Whitney, hand.              | No. 1 Cincinnati, plain head, univ. |
| No. 10 Pratt & Whitney, hand.     | No. 3 Cincinnati, universal.        |
| No. 3 Waltham, bench.             | No. 1 Kempsmith, b. g. universal.   |
| No. 3 Cincinnati, plain.          | No. 2 P. & W., Lincoln type.        |
| No. 13 Garvin, plain.             | No. 2 Thurston, die miller.         |
| No. 0 LeBlond, plain back geared. | No. 4 Becker, univ. (new, low pr.)  |
| No. 5 Garvin, plain back geared.  |                                     |

#### UPRIGHT AND RADIAL DRILLS.

- |                                        |                                           |
|----------------------------------------|-------------------------------------------|
| 5 ft. arm Western, universal.          | 35 in. Blaisdel, sl. hd., bk. gr., p. fd. |
| 5 ft. Bickford, plain, gear box.       | 34 in. Barnes, sl. hd., bk. gr., p. fd.   |
| 6 ft. Bickford, plain, gear box.       | 28 in. Snyder, sl. hd., bk. gr., p. fd.   |
| 4 ft. Bickford, plain cone.            | 25 in. Prentice Bros., sl. hd., bk. gr.,  |
| 4 ft. Fosdick, National, plain cone.   | p. fd.                                    |
| 28 in. New H. sl. hd., bk. gr., p. fd. | 18-20 in. and smaller.                    |

#### SENSITIVE DRILLS.

1 to 6 spindles, various makes.

#### SCREW MACHINES.

- |                                 |                                  |
|---------------------------------|----------------------------------|
| No. 1 Garvin.                   | No. 60 Brown & Sharpe automatic. |
| No. 2 Pratt & Whitney.          | 1/2 in. Cleveland automatic.     |
| No. 24 Pratt & Whitney.         | 1/2 in. Cleveland automatic.     |
| No. 51 National-Acme automatic. | 2 in. Cleveland automatic.       |

#### TURRET LATHES.

- |                                     |                                 |
|-------------------------------------|---------------------------------|
| Libby, geared head, fine condition. | 20 in. Fay & Scott, universal.  |
| 24x24 Jones & Lamson, set over hd.  | 7 smaller sizes, various makes. |

#### BORING MILLS—VERTICAL AND HORIZONTAL.

- |                          |                                |
|--------------------------|--------------------------------|
| 10 ft. Niles, 2 heads.   | 34 in. Colburn, swivel turret. |
| 76 in. Betts, 2 heads.   | No. 2 Barrett cylinder borer.  |
| 50 in. Colburn, 2 heads. | 42 in. Niles car wheel borer.  |
| 38 in. Rogers, 2 heads.  |                                |

#### CEMENT SINGLE END PUNCH AND SHEARS.

- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| 42 in. throat, capacity 4x1 1/2 in.   | Cincinnati sgl. end punch and shear, |
| Humphrey sgl. end punch and shear,    | 8 in. throat, capacity 4x1 1/2 in.   |
| 36 in. throat, capacity 1 1/2 x 1 in. |                                      |

No. 20 B  
No. 30 N  
C82 Ferr  
C94 Ferr  
No. 81 C  
No. P1 F  
No. P2 A

Bolt cutte  
Bolt head  
Centering  
Cutting-o  
Gear cutte  
Gear cutte  
Gear cutte

#### O. L. Pac

14x6 Lodg  
18x8 Prent  
22x36x22, 1

1 spindle I  
20 in. Prent  
20 in. Rarn  
20 in. Prent

24x24x5, 2

Gear cutte  
Hammer, 1  
Keyseater,

#### The Osbo

2x24 Jones  
12x8 Barnes  
14x6 Prentie  
18x8, 10x8 & 12

26x24x8 Ste  
22x32x10 Gr  
22x33x12 Ci

72 and 84 in  
64 in. Seller

Air compres  
Boring mach  
Boring mill  
Cock grinde  
Gas engines  
Gas furnace  
Grinder, sur  
Hack saws,  
Hammer, st  
Hammers, 3  
Keyseater, 1  
Nut taper,

## SECOND-HAND MACHINERY.

### H. A. Stocker—Continued.

#### POWER PRESSES.

- |                                     |                                         |
|-------------------------------------|-----------------------------------------|
| No. 20 Bliss, inclinable.           | No. 4 American Can, o. b. l., 24 in. s. |
| No. 38 Niagara, 1½ in. stroke.      | No. 3 American Can, o. b. l., 2 in. s.  |
| C82 Ferracate, armature notching.   | No. 2 American Can, o. b. l., 3 in. s.  |
| C94 Ferracate, armature notching.   | No. 67 Consolidated, 6 in. stroke.      |
| No. 81 Consolidated, 1½ in. stroke. | No. 73 Consolidated, geared.            |
| No. P1 Ferracate, 1½ stroke.        | No. 0 Blake & Johnson arch press.       |
| No. P2 American Can, 1½ in. stroke. |                                         |

#### MISCELLANEOUS.

- |                                        |                                       |
|----------------------------------------|---------------------------------------|
| Bolt cutter, 1½ in. Schlenker.         | Gear cutter, 50 in. Gould & F., auto. |
| Bolt header, ¼ in.                     | Hammer, helve, 40 lb. Bradley.        |
| Centering machine, 4 in. Whiton.       | Hammer, upright helve, 200 lbs.       |
| Cutting-off mche., 5 in. Hurlburt & R. | Hydraulic press, 40 ton.              |
| Gear cutter, 26 in. Brown & S., auto.  | Hydraulic press, 100 ton with pump.   |
| Gear cutter, 30 in. Flather.           | Pipe mche., 4 in. Bignall & Keeler.   |
| Gear cutter, 34 in. Whiton, auto.      | Pipe machine, 4 in. Stoeber.          |

### FOR SALE BY

**O. L. Packard Machinery Co., Chicago, Ill., and Milwaukee, Wis.**

#### LATHES.

- |                       |                                                                   |
|-----------------------|-------------------------------------------------------------------|
| 14x6 Lodge & Davis.   | 72x22, cp. rest, with raising blocks to increase swing to 120 in. |
| 18x8 Prentice.        |                                                                   |
| 22x36x22, plain rest. |                                                                   |

#### DRILLS.

- |                                |                                         |
|--------------------------------|-----------------------------------------|
| 1 spindle Prentice, sensitive. | 24 in. Sibley & Ware.                   |
| 20 in. Prentice.               | 25 in. Prentice.                        |
| 22 in. Barnes, power feed.     | 5 ft. Cincinnati full universal radial. |
| 23 in. Prentice.               |                                         |

#### PLANERS.

- |                                 |                 |
|---------------------------------|-----------------|
| 24x24x5, 2 heads on cross rail. | 24x24x6, Hendy. |
|---------------------------------|-----------------|

#### MISCELLANEOUS.

- |                               |                                           |
|-------------------------------|-------------------------------------------|
| Gear cutter, 36 in. Brainard. | Screw mche., ¼ in. P.&W., automatic.      |
| Hammer, steam, 250 lbs. Bell. | Shear, bevel, Thompson, for boiler plate. |
| Keyseater, Morton.            |                                           |

### FOR SALE BY

**The Osborne & Sexton Machinery Co., Columbus, Ohio.**

#### LATHES.

- |                                           |                                      |
|-------------------------------------------|--------------------------------------|
| 24 Jones & Lamson turret.                 | 20x8, 10 & 12 Hamilton, c. r., h. s. |
| 18x8 Barnes, compound rest, h. s. (2).    | 24x10 LeBlond, turret on shears.     |
| 14x6 Prentice, cp. rest, hol. sp.         | 27x12 special lathe.                 |
| 18x8, 10 & 12 Hamilton q. c., h. s. c. r. | 36x14 & 18 New Haven.                |

#### PLANERS.

- |                               |                                       |
|-------------------------------|---------------------------------------|
| 24x24x8 Steptoe-McFarlan.     | 36x36x12 Cincinnati, 2 heads.         |
| 22x32x10 Gray, 2 heads.       | 36x36x12 Sellers, 1 and 2 heads, (2). |
| 22x32x12 Cincinnati, 2 heads. | 48x48x20 Belmar, 4 heads.             |

#### BORING MILLS.

- |                                |                                |
|--------------------------------|--------------------------------|
| 72 and 84 in. Sellers.         | 83 in. Johnson, single head.   |
| Min. Sellers, widened pattern. | 7, 8 and 8 ft. Betts, 3 heads. |

#### MISCELLANEOUS.

- |                                          |                                                                                 |
|------------------------------------------|---------------------------------------------------------------------------------|
| Aircompressor, 100 ft. Bury.             | Press, foot, Niagara, heavy.                                                    |
| Boring mches., cyl., 20 in. Barrett (2). | Presses, foot, No. 1 Consol. (7).                                               |
| Boring mill, horiz., 1½ in. B. & S.      | Presses, power, No. 0 Consol. (2).                                              |
| Cock grinder, double.                    | Rolls and break, power, 8 ft.                                                   |
| Gas engines, 10, 15, 25 and 125 h. p.    | Shapers, 20 in. Smith & Mills, (3).                                             |
| Gas furnace, No. 2 Chicago.              | Tapping mch., vertical, No. 4 Garvin.                                           |
| Grinder, surface, No. 3 B. & S.          | Tapping mches., Webster & P., (2).                                              |
| Hack saws, Nos. 1, 2 and 3.              | Miller plain, No. 1 Kempsmith.                                                  |
| Hammer, steam, 1,100 lb. Morgan.         | Wheel press, hydraulic, 150 ton.                                                |
| Hammers, 3,000 and 5,000 lb. Toledo.     | Shovel machinery, a complete outfit, also stove machinery, all practically new. |
| Keyseater, No. 1 & 2 W. P. Davis.        |                                                                                 |
| Nut tapper, 6 spindle, 2 in. Acme.       |                                                                                 |

## SECOND-HAND MACHINERY

### FOR SALE BY

**Joseph T. Ryerson & Son, - 16th and Rockwell Sts., Chicago**  
**POWER PUNCHES.**

#### Item.

- 287 Cleveland 90 in. multiple punch, 12 in. throat; capacity thirty 13-16 in. holes in  $\frac{1}{2}$  in.; motor drive.  
498 Royersford No. 2 double end punch and shear, 7 $\frac{1}{2}$  in. throat; punch  $\frac{1}{2}$  x  $\frac{1}{2}$  in.; shear  $\frac{3}{4}$  x  $\frac{1}{2}$  in.

### POWER SHEARS.

- 291 Cleveland 10 ft. gate shear, 36 in. gap, capacity 2-16 in.; motor drive.  
59 H. Pels & Co. Johns beam shear; cap. 12 in. 35-lb. beams; belt drive.  
504 H. Pels & Co., Johns T 40 beam shear; capacity 15 in., 60-lb. beams.  
247 No. 2 Lennox rotary bevel shear, for  $\frac{1}{2}$  in. plate; belt drive.  
292 Special stroke type bevel shear; capacity  $\frac{1}{2}$  in. plate.  
564 No. 34 Wangler rotary bevel shears for  $\frac{1}{2}$  in. plate, belt drive.

### HYDRAULIC MACHINERY.

- 263 Morgan 10 $\frac{1}{2}$  ft. riveter, 100 tons.  
267 Hori. punch, 12 in.; cap. 1 x  $\frac{1}{2}$  in.  
268 Morgan 48 in. punch, cap. 2 x 1 in.  
269 Morgan 45 in. pch., cap. 2 $\frac{1}{2}$  x 1 in.  
273 Bement-Miles 10 ton riveter crane.  
272 Morgan 10 ton riveter crane.

### PLANERS.

- 215 Gray, 36x36x10, 2 heads; arranged for motor.  
158 Pond, 26x26x6, heavy pattern, 1 head; belt drive.  
163 Sellers, 36x36x7, 1 head; belt d.  
166 Bement, 36x36x7, 2 hds.; belt d.  
167 Sellers, 42x42x6 $\frac{1}{2}$ , 2 hds.; belt d.  
169 Sellers, 42x42x8 $\frac{1}{2}$ , 2 hds.; belt d.  
137 Sellers, 48x48x8 $\frac{1}{2}$ , 2 hds.; belt d.

### LATHES.

- 482 Muller 24x10 com. rest., hol. sp.  
535 Gray 16x10, hol. sp., p. c. f.  
506 Gisholt 28 in. turret, 3 $\frac{1}{2}$  in. hole in spindle.  
507 Gisholt 34 in. turret, 4 $\frac{1}{2}$  in. hole in spindle.  
234 Hendey, 18x10, q. c. gear, hol. sp.; com. rest; p. c. f.

### DRILLS.

- 395 Niles, 30 in. adj. head, hand wheel feed only.  
516 Barnes, 26 in. adj. head, power and hand feed.  
517 Snyder, 25 in. adj. head, power and hand feed.  
558 Cincinnati, 28 in. adj. head, b. g., power feed.  
199 Sigourney, 4 spindle, sensitive.  
476 Lodge & Davis, 30 in. adj. head; back geared; power feed.

### SHAPERS.

- 513 Flather 14 in., crank.  
511 Hendey 15 in., friction.  
560 Flather 18 in., crank.  
514 Steptoe, 14 in. crank.  
512 Smith & Mills, 15 in. crank.  
557 J. G. Blunt 16 in., friction.

### PNEUMATIC RIVETERS.

- 290 Allen type toggle; 48 in. reach; 9 in. gap; capacity  $\frac{1}{2}$  in. rivets.  
498 Allen compression lever; 9 in. reach; 14 in. gap; capacity  $\frac{1}{2}$  in. rivets.  
491 Hanna patented lever; 25 in. reach; 15 in. gap; capacity  $\frac{1}{2}$  in. rivets.

### COMPRESSORS.

- 562 Ingersoll-Rand 8x10, belted. | 563 Bury 10x10, belted, with tank.

### MISCELLANEOUS.

- 238 Bending and straightening machine, Cosgrove, capacity 15 in. beams.  
213 Boring and drilling machine, horizontal, 4x27x60 in., Heaman & Smith.  
589 Boring mill, Niles 10 to 16 ft. extension.  
376 Concrete mixer; capacity 11 cu. ft.; complete with engine and boiler.  
240 Cornice brake, 8 ft. Geo. A. Ohl, capacity No. 18 gauge.  
201 Miller, plain, No. 9 Garvin, table 7 $\frac{1}{2}$ x30 in., back geared.  
313 Pipe cutter, No. 5 $\frac{1}{2}$  Merrill, capacity 2 in. pipe, belt drive.  
486 Planer, plain rotary, 26 in. head, No. 1 Newton, arranged for motor.  
208 Profiling machine, No. 2 Pratt & Whitney.  
541 Screw machine, 1 in. Cleveland automatic.  
538 Screw machine, 2 in. Cleveland automatic.



## SECOND-HAND MACHINERY

### FOR SALE BY

**The E. L. Easley Mchy Co., 555-557 Washington Blvd., Chicago, Ill.**

A partial list of used machinery for quick delivery. We have a large stock of new machine tools not listed here. If you don't find here what you want, write us, giving sizes and detail. Our stock is changing constantly and we may have what you want. Special prices quoted this month on account of limited room.

#### DRILLS.

4 spindle Quint turret drill.  
6 spdl. No. 3 Garvin, mult., table fd.  
4 spindle 20 in. W. F. & J. Barnes gang drill, all spdls. p. f., 1 sp. b. g.  
4 spindle Barnes Drill Co.'s all gd. gang drill, b. g. and p. f.  
20 in. Barnes all geared, power feed.  
23 in. Barnes back geared and p. f.  
22 in. Bickford, sliding head.  
25 in. Barnes stationary hd., b. g. and p. f.

13 in. Baker Bros. high speed drill presses, complete, (2.)  
26 in. W. F. & J. Barnes, sliding head, drill complete; fine condition.  
28 in. Hamilton, sl. hd., b. gd., p. f.  
28 in. Moline, sliding head, upright.  
28 in. Kern, s. hd., b. g. & p. f. nearly new.  
3 ft. Hilbert, plain, radial, b. g. and tapping attachment.

#### ENGINE LATHES.

14x8 Lodge & Shipley, c. r. & taper.  
16 in. x8 ft. Champion, standard eng. lathe, b. g., used 14 months.  
14x7 Blaisdell, taper attachment.  
15x6 Walcott, back geared, rebuilt.  
16x6 Muller, hollow spindle, p. c. f.  
16x6 American, c. r., late pattern.

16x8 Champion, c. r., 3 step cone, double b. g.  
20x6 Flather, overhauled, fine cond.  
23x12 New Haven, comp. rest.  
30x14 Fifield, compound rest.  
42x16 Fifield tpl. gd., compound rest.

#### MISCELLANEOUS LATHES.

No. 21 Garvin, plain head, Monitor, 13-16 in. hollow spindle.  
No. 212 in. Foster plain hd. Monitor  
14 in. Monitor, plain head, F. K.  
13 in. Gisholt, standard turret, comp.

28 in. Gisholt, standard turret, comp.  
30 in. x8 ft. P. & W., pl. hd. chucking lathe, 24 in. 4-j. chk., p. f. to t. s.  
Pearson b. g. hub machine, like turret lathe, 23 in. h. s.

#### PLANERS AND SHAPERS.

Planer, 16x16x3 1/2 Putnam, 1 head.  
Planer, 24x24x5 Betts, 1 head.  
Planer, 42x36x12 Sellers, 4 heads.

Shapers 16 in. Milwaukee, b. g. crank.  
Shapers 16 in. Hamilton, b. g. crank.  
Shapers 16 in. Hendy, friction.

#### SCREW MACHINES.

2 in. Cleveland, standard automatic, 5 hole turret.  
No. 6 Warner & Swasey, 2 in. cap.  
No. 1 Pratt & Whitney, 7-16 in. cap.

Windsor, 1 1/2 in. capacity.  
7-16 in. Cleveland automatic.  
1 1/2 in. National-Acme, automatic, nearly new.

#### MISCELLANEOUS.

Air hammer, No. 66 Ingersoll-Rand, long stroke, nearly new.  
Baling press, Champion, for baling scrap tin or iron.  
Blower, steel, No. 10 Sturtevant, 7 ft. high, 18 in. outlet.  
Bolt cutter, 1 1/2 in. Acme, single.  
Bolt cutter, 2 in. Bement, single.  
Bolt pointer, 1 in. Adams.  
Buffing lathe, 2 h. p. motor drive, 110 volts, d. c.  
Cold saw, 20 in. Burke.  
Cold saws, No. 4 Keystone, 4 1/2 in.  
Cold saw, No. 14 Higley, fine order.  
Cranes, portable shop, 1 & 2 ton.  
Grinders, cutter & reamer Cin., (2.)  
Grinder 10x32 in. Landis.  
Grinder, cock, W. & S., single spdl.  
Grinder, disc, 20 in. Ransom.  
Grinder, 20x3 in. Diamond, single wheel, wet.  
Keyscater, No. 2 Mitts & M., 13 in.

Keyscater, No. 3 Davis, 14 cutters.  
Keyscater, No. 4 Morton, 18 in. stroke, cap. up to 2 1/2 in.; complete.  
Miller, plain, No. 1 Kemp Smith, latest type, fine order.  
Miller, W. & S., 2 spindle valve.  
Pipe mche., 4 in. Borden, complete.  
Pipe machine, 4 in., No. 5 1/2 Merrill.  
Profiler, 2 spindle, Ames, fine order.  
Pulley boring machine, 36 in. Streit.  
Pulley turning mche., 36 in. Stevens.  
Punch press, No. 4 American Can, open back inclinable.  
Punch press, No. 20 Bliss.  
Punch press, No. 164 Consolidated st. side, dbl. crank, fine order.  
Punch or shear, cap. 1 1/2 in. Hercules, 11 in. throat, gd. sgl. end, wt. about 10,000 lbs.  
Rivet spinner, 1 in. National.  
Threading mche., roll, Rudolphi & K.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Niles-Bement-Pond Company, 111 Broadway, New York.**  
**Located at Chicago, Boston and New York.**

#### LATHES.

B. & D. single axle lathe.  
 No. 2 Hlement double axle lathe.  
 No. 3 Putnam extra heavy axle lathe.  
 10x5 Champion, standard.  
 13x6 P. & W., r. and f. rest, taper.  
 14x5 American, square arbor.  
 14x6 F. B. Miles, comp. rest.  
 14x6 LeBlond standard.  
 16x6 speed lathe.  
 18x6 Blaisdell, rise and fall rest.  
 19x6 D. W. Pond, turret tool post.

20x10 LeBlond q. c. & comp. rest.  
 21x6 Bridgeport, turret boring.  
 21x8 Star, turret carriage.  
 22x10 F. B. Miles, comp. rest.  
 22x12 Niles, back geared.  
 22x16 Fitchburg.  
 21 and 48 in. Harrington, gap, boring and chuck.  
 36 in. Niles car wheel borer.  
 42 in. Niles steel car wheel lathe.  
 42 in. x22 ft. Niles, tr. gd.

#### TURRET MACHINERY.

$\frac{1}{2}$  in. No. 0 Hartford, automatic.  
 $\frac{1}{2}$  in. No. 00 Hartford, Pratt & Whitney, automatic.  
 $\frac{1}{2}$  in. No. 0 Pratt & W., wire feed.  
 $\frac{1}{2}$  in. National-Acme, 4 spindle, automatic.  
 $\frac{1}{2}$  in. No. 1 P. & W., wire feed.  
 $\frac{1}{2}$  in. No. 1 Garvin, wire feed.  
 $\frac{1}{2}$  in. No. 1 Spencer, turret, auto.

$\frac{1}{2}$  x  $\frac{1}{2}$  in. P. & W., tur., new mod.  
 1 $\frac{1}{2}$  in. Gridley automatic.  
 2 15-16 in. No. 3 Niles, screw mche.  
 20 in. x7 ft. 6 in. F. E. Reed, chucking lathe.  
 24 in. Conradson, semi-automatic.  
 28 in. x12 ft. Milwaukee, turret lathe.  
 21-32x1 $\frac{1}{2}$  in. No. 2 Brown & Sharpe, automatic.

#### PLANERS.

17x17 in. x4 ft. Whitcomb.  
 20x23 in. x16 ft. Ferris & Niles, 2 hds.  
 26x27x6 Pratt & Whitney.

30x30 in. x24 ft. Sellers, 2 heads.  
 32x32 in. x14 ft. Niles.

#### SHAPERS.

18 in. Cincinnati, double head, traverse shaper.

15 in. Hendey, friction.  
 32 in. Cincinnati.

#### DRILLS.

13 in. No. 1 sensitive friction, 110 volt, d. c. motor.  
 30 in. Gould & E., sliding head.  
 36 in. Gould & E., sliding head.  
 48 in. Niles, sliding head.  
 Prentiss port, univ. rad., cap. 2 in.  
 4 ft. 6 in. Barr, plain radial.  
 5 ft. 6 in. Niles, semi-universal.  
 6 ft. 10 in. Niles No. 2, semi-univ.  
 7 ft. 6 in. Niles No. 5, full univ.

10 in. 2 spindle Slate, sensitive.  
 12 in. 2 spindle Foote-Burt, sensitive.  
 14 in. 3 spindle Garvin, gang.  
 14 in. 4 spindle D. P. N.  
 17 in. 4 spindle J. & L., gang.  
 14 in. 6 spindle No. 3 Garvin, gang.  
 6 spindle special Langelier.  
 No. 10, 10 spindle Pratt & Whitney cap. 1 15-16 in., 220 v., d. c. motor.

#### BORING MILLS.

36 in. No. 2 Brown & S., vert. turret.  
 Nicholson & Waterman boring machine, 3 in. spindle.  
 Kelly horizontal, 2 in. spindle.

Bement & Son horiz., 2 $\frac{1}{2}$  in. spindle.  
 Stearns 96 in. special cylinder borer.  
 7 ft. Pond boring and turning mill.

#### GRINDERS.

14x2 in. Gould & E., water tool.  
 18x2 in. Pedrick, double wet tool.  
 24x3 in. Pedrick, double wet tool.  
 20x1 $\frac{1}{2}$  in. Ransom, water tool.

3 in. Sellers drill grinder.  
 Diamond polishing stand.  
 No. 0 Northampton polishing jack.

#### MILLING MACHINES.

No. 2 Brown & Sharpe, universal, 20x10x16 in.  
 No. 4 Becker-Brainard, plain, 24x7x16 in.  
 No. 5 B. & B. plain, 9x2x7 in.

No. 3 B. & B. universal 32x8 $\frac{1}{2}$ x20 in.  
 No. 2 Garvin, plain, 31 $\frac{1}{2}$ x5x16 in.  
 Garvin single spindle profiler, table 21x24 in.

#### STEAM ENGINES (New.)

10x10 28 h. p. horizontal single cylinder c. c. automatic.  
 12x12 45 h. p. horizontal single cylinder c. c. automatic (2).  
 12x12 45 h. p. horizontal single cylinder c. c. throttling (2).

Bicycle  
 Cut-off  
 Cutting  
 Forging  
 Hammer  
 lb., B  
 Hammer  
 Iron for

#### New Y

Drill pr  
 Lathe, 2  
 Planer,  
 Planer,  
 Sand bla  
 Screw m  
 Turning  
 Turret l  
 Turret l  
 Turret l

#### 210-212

16x 6 Re  
 18x 8 Fl  
 25x16 Re

6 spindle  
 14 in. Ba  
 28 in. Po  
 28 in. Ba

24x24x6  
 30x30x8

8x 8 Cu  
 10x10 H  
 10x12 Cu

14x8 $\frac{1}{2}$ x10  
 14x12x18  
 18x12x12

Air tank,  
 Air tank,  
 Bolt cutt  
 Bolt head  
 Boring m  
 Bulldozer  
 Hammer  
 Hammer  
 Keyway  
 Motor, 12  
 Motor, 12  
 Miller, b

## SECOND-HAND MACHINERY

### Niles-Bement-Pond Company—Continued.

#### MISCELLANEOUS.

Bicycle tube hand rolls.	Planer vise, 16x34 in.
Cut-off machine, 24 in. Betts.	Planer vise, 16x2 in., swivel base.
Cutting-off machine, 16 in. Bement.	Punch and shear, combination,
Forging machine, 2 in. Blakesly.	power, 4 in. capacity.
Hammer, steam, single frame, 1,100	Spiral spring winding mchc., Shuster.
lb., Bement.	Tapping machine, horizontal, No. 1
Hammer, power, 350 lb. Lingle.	Garvin.
Iron forge on legs, 28x13x8 in.	Vulcanizer, rubber, Hartford, small.

#### FOR SALE BY

**New York Machinery Exchange, - 50 Church St., New York City.**

Drill press, 40 in. Barnes, b. g., automatic feeds.  
 Lathe, 28x16 ft. Flather.  
 Planer, 22x22 in. x 6 ft. Flather.  
 Planer, 30x30 in. x 8 ft. Pond, 2 heads.  
 Sand blast outfit, complete, 143 ft. capacity.  
 Screw machines, Brown & Sharpe automatic, (13).  
 Turning lathe, Gridley automatic, for pistons, rings, etc.  
 Turret lathes, Potter & Johnston automatic, (2).  
 Turret lathe, 16 in. x5 ft., Pratt & Whitney.  
 Turret lathe, 20 in. x6 ft. Pratt & Whitney.  
 Turret lathe, 20 in. x9 ft. Reed.

#### FOR SALE BY

**Wm. C. Johnson & Sons Machinery Co.,**

**210-212 Washington Ave.**

**St. Louis, Mo.**

#### LATHES.

16x 6 Reed.	48x16 double head, column facing.
18x 8 Flather.	50x16 New Haven triple geared.
25x16 Reed.	

#### DRILLS.

6 spindle Quint.	32 in. Lodge & Davis, sliding head.
14 in. Barr sensitive, two spindle.	36 in. Dreses, radial.
28 in. Pond, sliding head.	60 in. arm, plain radial.
28 in. Barnes, sliding head.	60 in. Bickford, with tapping att.

#### PLANERS.

24x24x6 Smith & Silk.	36x36x12 Niles.
30x30x8 Cleveland, open-side.	36x36x12 Sellers, 2 heads.

#### AIR COMPRESSORS.

8x 8 Curtis, belted.	960 cu. ft. steam driven.
10x10 Herron & Bury, belted.	94 in. Westinghouse, steam driven.
10x12 Curtis, belted.	

#### STEAM PUMPS.

14x8½x10 Worthington, d.	16 & 26x12x18 Gordon duplex, pl.
14x12x18 Gordon duplex, pl.	22x14x24 Dean duplex.
18x12x12 Snow duplex.	

#### MISCELLANEOUS.

Air tank, 36 in. x8 ft.	Miller, universal, No. 1 Brown & G.
Air tank, 36 in. x8 ft.	Pipe machine, 6 in. Bignall & Keeler.
Bolt cutter, 1½ in. National.	Pipe machine, 4 in. Borden.
Bolt header, 1 in. National.	Press, power, 17 in. throat.
Boring machine, horizontal, Betts.	Punch, single, 12 in., 4 in. 4.
Bulldozer, No. 8 Williams & White.	Punch and shear, 48 in. throat.
Hammer, strap, 50 lb. Bradley.	Punch and shear, dble. No. 5 L. & A.
Hammer, vacuum, 80 lb. Yeakley.	Screw machine, 24 in. American.
Keyway cutter, No. 6 Morton.	Screw machine, semi-automatic 4 in.
Motor, 15 h. p. sgle. phase, Wagner.	Cleveland.
Motor, 15 h. p., 3 ph., 60 cycle, 220 v.	Tube cutter, 2 in., rotary.
Miller, bench, No. 3 Burke.	

## SECOND-HAND MACHINERY

### FOR SALE BY

**Western Machinery Co., 6th and Baymiller Sts., Cincinnati, Ohio.**

#### LATHES.

- |                                   |                                      |
|-----------------------------------|--------------------------------------|
| 14x7 Putnam, hollow spindle.      | 22x10 LeBlond, tur. on shear, chuck. |
| 16x6 Jones & Lamson, h. s.        | 22x9 New Haven, compound rest.       |
| 17x8 Fitchburg, comp. rest.       | 26x12 Perkins, compound rest.        |
| 18x10 Nicholson & Waterman, c. r. | 26x18 Niles, comp. rest & taper.     |
| 20x8 LeBlond, turret on carriage. | 47x20 Niles, triple gears.           |

#### BORING AND DRILLING MACHINERY.

- |                                         |                                           |
|-----------------------------------------|-------------------------------------------|
| 7 ft. Niles vert. boring mill, 2 heads. | 20 in. Sibley & Ware, plain.              |
| 7 ft. Callahan, 1 head, \$500.          | 30 in. Bickford, slid. hd., b. g., p. fd. |
| 20 in. Sibley, wheel and lever, (2.)    | 10 in. bench drills, with chuck, (3.)     |

#### PLANERS AND SHAPERS.

- |                          |                                                            |
|--------------------------|------------------------------------------------------------|
| 25x25x6 Sellers.         | 12 in. Traverse head shaper, with gear cutting attachment. |
| 26x26x8 Pratt & Whitney. | 16 in. Steptoe, crank shaper.                              |
| 26x26x8 G. A. Gray.      |                                                            |
| 36x36x8 Pond, 1 head.    |                                                            |

#### MISCELLANEOUS.

- |                                              |                                                         |
|----------------------------------------------|---------------------------------------------------------|
| Bolt cutter, 1 1/2 in. Green River, h. or p. | Ice machine, 2 ton.                                     |
| Bolt cutter, 2 1/2 in. National.             | Ice machines, 17 ton (2).                               |
| Gas engines, 6, 10, & 20 h. p.               | Pipe machine, 4 in. Forbes-Curtis.                      |
| Hammer, steam, 450 lb. Bell.                 | Punch, power, Newbold, 16 in. throat, weight 6,000 lbs. |
| Hex. carriage tur. attch., LeBlond.          |                                                         |

And other miscellaneous machinery.

What metal working machines have you for sale or trade?

### FOR SALE BY

**A. D. White Machinery Co., 108-114 N. Jefferson St., Chicago.**

#### LATHES.

- |                                    |                               |
|------------------------------------|-------------------------------|
| 9x42 in. Shepard, hollow spindle.  | 18x12 Barker, shopworn.       |
| 16x6 Lodge & Shipley, q. c.        | 20x12 LeBlond, c. r., heavy.  |
| 16x8 Haisdell.                     | 21x12 Davis & Egan, c. r.     |
| 16x8 Davis, c. r., fine condition. | 30x10 Powell, fine condition. |

#### DRILLS.

- |                                     |                                |
|-------------------------------------|--------------------------------|
| 3 spindle Baker.                    | 30 in. Kerkhoff, sliding head. |
| 4 spindle Barr, sensitive.          | 30 in. Bickford, sliding head. |
| 28 in. Bickford, sliding head, (4). | 32 in. Bickford, sliding head. |
| 28 in. Aurora, sliding head.        | 3 ft. Bickford radial, cheap.  |

#### PLANERS.

- |                              |                            |
|------------------------------|----------------------------|
| 24x 6 Gray, 1 head (2).      | 28x 8 Gray, 1 head (2).    |
| 24x 6 Pond, 1 head.          | 32x 8 Betts, 1 head.       |
| 25x 6 Sellers, spiral drive. | 36x10 Gray, 2 heads.       |
| 26x 6 Gray, 1 head.          | 36x12 Cincinnati, 2 heads. |
| 26x 8 Gray, 1 head (2).      | 38x10 Gray, 1 head, fine.  |
| 26x10 Gray, 1 head.          | 52x25 Betts, 1 head.       |

#### SCREW MACHINES AND TURRET LATHES.

- |                                         |                                       |
|-----------------------------------------|---------------------------------------|
| 16 in. No. 3 Pearson screw machine.     | 13 in. Dreeses turret lathe.          |
| No. 2 1/2 Pratt & Whitney sc. mche.     | 16x5 Flather turret lathe.            |
| No. 3 Pratt & Whitney sc. mche.         | 18 in. Dreeses turret lathe.          |
| 1/2 in. Cleveland, automatic.           | 18 in. D. & E., fr. hd., 2 step cone. |
| 1/2 in. Pratt & Whitney, automatic (4). | 5 1/2 in. belt turret lathe.          |
| 1/2 in. Cleveland, semi automatic.      |                                       |

#### PUNCH PRESSES.

- |                          |                                         |
|--------------------------|-----------------------------------------|
| No. 0 Cady.              | No. 7 1/2 Bliss, geared, fine.          |
| No. 18 Bliss inclinable. | No. 3 R. & K. inclinable, 3 in. stroke. |

#### MISCELLANEOUS.

- |                                    |                                      |
|------------------------------------|--------------------------------------|
| Cutting-off machine, 2 in. H. & R. | Keyseater, No. 2 Catlin.             |
| Grinder, cutter, H. G. Barr.       | Keyseater, 16 in. Morton.            |
| Grinder, surface, 8x18 in.         | Miller, No. 0 Owen, slotting att.    |
| Hammer, power, 35 lb. Justice.     | Miller, No. 2 Garvin Lincoln.        |
| Hammer, power, 50 lb. Dienelt.     | Pipe machine, 4 in. Oster, like new. |
| Hammer, drop, 200 lb. Norton.      | Shaper, 16 in. Smith & Mills.        |
| Hammer, 600 lb. Morgan & Williams. | Shaper, 16 in. Steptoe, cheap.       |

For other bargains, and prices, get our "Yellow Book." It costs you nothing and can save you time and money

## SECOND-HAND MACHINERY

### FOR SALE BY

**Baird Machinery Company, 23rd & Smallman Sts., Pittsburg, Pa.**

#### CRANES.

20 ton electric traveling, 51 ft. span. | 20 ton electric traveling, 50 ft. span.  
30 ton electric traveling, 75 ft. span. | 20 ton electric traveling, 40 ft. 8 in. s.

#### BORING MILLS.

10 ft. Pond, double head. | 42 in. Dawson, double hd., swiveling.

#### DRILL PRESSES.

24 ft. stationary head, b. g., p. f. | 3 spindle Garvin.  
30 in. sliding head, b. g., p. f. | 20 in. Prentice upright.  
No. 3 Dallett portable radial. | 4 ft. Fosdick, universal table.  
4 ft. Prentice Brothers radial. | 5 ft. Betts plain radial.  
5 ft. Pond radial. | 6 ft. Western radial half universal,  
2 ft. Gang plain radial. | motor driven.  
6 ft. Gang plain radial. | 6 ft. Pond radial.

#### LATHES, ENGINE.

16x6 Reed. | 22x12 Pond.  
18x8 New Haven. | 36x16 Pond, back geared.  
18x8 Prentice Brothers. | 38x34 New Haven.  
24x8 Ames. | 48x32 Niles, triple geared.

#### LATHES, TURRET, ETC.

15x5 Drees & Mueller, univ. turret. | 18x6 Springfield, universal turret.  
16x5 Gage, universal brass turret. | 15x6 No. 1 American T. & M. Co.,  
18x5 Meridan forming lathe. | square arbor.  
2x24 Jones & Lamson, flat turret. | 12 in. Warner & Swasey, dbl. key lathe.

#### PIPE MACHINES.

6 in. Saunders. | 12 in. Curtis.  
6 in. Williams.

#### PUNCHES AND SHEARS.

No. 5 Long & Allstatter, single, | No. 2 Hillis & J., with spacing tbl.  
punch & shear

#### HAND POWER PUNCHES AND SHEARS.

No. 20 Watson & Stillman light channel.

#### HAND SCREW PUNCHES.

Cleveland bevel shear, 1 in. plate. | Double heavy punch & shear.  
Niagara power circle shear. | Horizontal punch.  
Punch, power, for heavy angles, etc. | Horizontal straightening machine.  
Horizontal punch, 10 in. throat.

#### MILLING MACHINE.

No. 2 Davis & Egan. | 24 in. Ingersoll, slab.  
22 in. Ingersoll, slab.

#### COLD SAWS.

Newton 24 in. | Newton steel foundry, 40 in.

#### PLANERS.

24x24x6 1 head. | 36x36x8 Detrick & H., 3 hds., open s.  
36x36x10 Putnam, 1 head. | 48x48x10 Detrick & H., 3 hds., o. s.

#### SHAPERS.

14 in. Springfield, single geared. | 30 in. Morton, draw stroke.  
25 in. Gould & Eberhardt, sgle. gd.

#### BOILER SHOP TOOLS.

5 foot bending rolls. | 5 ft. Pedrick & Ayer riveter.  
Pneumatic hammers. | 40 lb. L. & A., helve hammer.  
Air drills | 600 lb. Morgan steam hammer.  
Air hoists.

#### MISCELLANEOUS.

Boiler, 6 h. p., complete. | Keyseater, 18 in. Morton.  
Bolt cutter, 2 in. Acme, 1½ in. header. | Miller, sing. spdl., 22 in. Ingersoll.  
Cut-off saw, Reade. | Nickel plating plant, complete.  
Engine, gas, 25 h. p. Bessemer. | Planer, portable, 60 in. Morton.  
Grinder, steam, vertical, 6 h. p. | Riveter, pneumatic, Herman.  
Grinder, wet tool, No. 2 Diamond. | Screw machine, semi-auto., 10 in.  
Hack saw, 12 in. Q. & C.

## SECOND-HAND MACHINERY

### FOR SALE BY

**J. J. McCabe,** - - - **30 Church St., New York City.**

#### VERTICAL BORING AND TURNING MILLS.

- 10 ft. Niles-Bement-Pond, 2 heads, fitted up complete with Westinghouse motors, still in operation.
- 10 ft. Niles-Bement-Pond, 2 heads, thread cutting attachment, belt driven, still in operation.
- 7 ft. Bement, single head.
- 4½ ft. Colburn, double head.
- 3½ ft. King, double head, complete, motor driven.
- 3½ ft. Bullard, turret head.
- 3 ft. Niles, double head.
- 3 ft. Bullard, single head.

**HOR. FLOOR BORING, DRILLING & TAPPING MACHINE**  
Niles (Ridgway), 3 in bar, 18 in. feed, A-1 condition, double column, heavy base plate, 16x8 ft.

#### HOR. BORING AND DRILLING MACHINES.

- 2½ in. bar, Bement, outside support.
- 2½ in. bar, Bement, outside support.

#### TURRET LATHES.

- 24 in. Gisholt, 4½ in. holes, with taper attachment, 2 carriages.
- 26 in. American, Gisholt type, chucks and tools.
- 32 in. American, Gisholt type, chucks and tools.
- 2x24 in. Warner & Swasey, hollow hexagon, with tools.

#### DRILLS, RADIAL.

- 7 ft. arm, Bement, standard, heavy pattern.
- 6 ft. arm, Niles Tool Works, outer support and table.
- 5½ ft. arm, Baush, heavy, weight 14,000 lbs., with table.
- 5 ft. arm, Prentice Bros., heavy, with table.
- 4 ft. arm, Prentice Bros., gear speed box, with table.
- 4 ft. arm, Niles Tool Works, half-universal, with table.
- 2½ ft. arm, Fosdick Co., standard, with table.

#### DRILL. MULTIPLE.

- 8 spindle, Western Co., capacity 1½ in. holes.

#### LATHE. DOUBLE SPINDLE.

- 26-44 in. swing, 12 ft. bed, McCabe, complete.

#### LATHES, TRIPLE GEARED.

- |                                                              |                                 |
|--------------------------------------------------------------|---------------------------------|
| 162 in. x30 ft., Niles-Bement-Pond heavy, cost new \$12,000. | 54x21 Putnam, heavy.            |
| 90x18 Fitchburg, heavy.                                      | 52x28 Fitchburg, heavy.         |
| 72x21 Putnam, heavy.                                         | 50x32 Bement, heavy.            |
| 64x36 Bement, heavy.                                         | 48x24 Fitchburg, blocks 66 in.  |
|                                                              | 42x18 Johnson, separate blocks. |

#### LATHES, BACK GEARED.

- |                            |                          |
|----------------------------|--------------------------|
| 38x16 Putnam, heavy.       | 26x12 Blaisdell.         |
| 36x26 Fay & Scott.         | 24x12 Harrington, heavy. |
| 26x20 American Tool Works. | 20x10 Standard.          |
| 30x14 Bradford.            | 18x8 Bradford.           |

#### PLANERS, SPIRAL GEARED.

- |                            |                            |
|----------------------------|----------------------------|
| 72x72x26 Sellers, 4 heads. | 48x48x7½ Sellers, 1 head.  |
| 54x54x16 Sellers, 4 heads. | 36x36x26 Sellers, 2 heads. |

#### PLANERS, SPUR GEARED.

- |                          |                           |
|--------------------------|---------------------------|
| 42x42x18 Miles, 2 heads. | 36x36x10 Powell, 2 heads. |
| 42x42x14 Pond, 2 heads.  | 36x36x8 Bement, 2 heads.  |
| 38x38x10 Betts, 2 heads. | 36x36x8 Pond, 1 head.     |
| 36x36x12 Gray, 2 heads.  | 32x32x8 Pond, 2 heads.    |
| 36x36x12 Niles, 3 heads. | 30x30x8 Sellers, 1 head.  |

#### SLAB MILLERS, PLANER TYPE.

- |                          |                        |
|--------------------------|------------------------|
| 22 in. x5 ft. Ingersoll. | 36 in. x11 ft. Newton. |
| 24 in. x6 ft. Bement.    |                        |

Outfit your shop from shop outfits we lately purchased. Largest assortment of machine tools—Lathes, Planers, Drills, Shapers, Milling Machines, Turret Lathes, Upright Drills, Boring Mills, Slotters, Hammers, Bolt and Pipe Machines, Punches, Shears, etc.

## SECOND-HAND MACHINERY.

**J. J. McCabe—Continued.**

Also complete boiler shop outfit.

### PUNCH AND SHEARS.

- |                                    |                                    |
|------------------------------------|------------------------------------|
| 38 in. throat, single, Boston.     | 15 in. throat, double, Hilles & J. |
| 27 in. throat, single, Hilles & J. | 9 in. throat, single, Hilles & J.  |
| 24 in. throat, single, Hilles & J. | 8 in. throat, double, Long & A.    |
| 19 in. throat, single, Long & A.   |                                    |

### HORIZONTAL FLANGE PUNCH.

Long & Allstatter horizontal flange punch.

### BENDING ROLLS.

- 10 ft. drop-end housing, heavy, weight 20,000 lbs.  
 8 ft. Hilles & Jones, drop-end housing, heavy.  
 6 ft. Hilles & Jones, solid housing, heavy.

### HYDRAULIC RIVETING OUTFIT.

6 ft. gap, Bement, hydraulic riveting outfit.

## FOR SALE BY

**The Motch & Merryweather Machinery Company,**  
**707-715 Lakeside Av., N. W., Cleveland, Ohio**

**Branches: Detroit, Cincinnati, Pittsburgh.**

Refitted Machine Tools:

### BORING MILLS.

- |                                  |                          |
|----------------------------------|--------------------------|
| 30 in. Bullard, plain table (2). | 60 in. Bullard, 2 heads. |
| 51 in. Niles, 2 heads.           |                          |

### DRILL PRESSES—UPRIGHT.

- |                                      |                          |
|--------------------------------------|--------------------------|
| 20 in. Barnes.                       | Baker, high speed        |
| 26 in. New Haven, sliding head, (2). | Dallett, portable (2)    |
| 36 in. New Haven, sliding head.      | 6 spindle Quint, turret. |
| 28 in. Rockford, good as new.        |                          |

### DRILLS—RADIAL.

- |                            |                    |
|----------------------------|--------------------|
| 3 ft. Fosdick.             | 8 ft. Pond, heavy. |
| 4 ft. Fosdick.             | 5 ft. Fosdick.     |
| 4 ft. Box, half universal. |                    |

### GEAR CUTTERS.

- |                                     |                              |
|-------------------------------------|------------------------------|
| 33x9 in. x 4 p. Gould & Eberhardt.  | 20 in. Rhenania gear hobber. |
| 48x10 in. x 5 p. Gould & Eberhardt. |                              |

### GRINDERS.

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| No. 1 Landis internal.            | No. 60 Heald, cylinder, (2).        |
| No. 3 Landis universal, (2).      | No. 2 Leland & Faulconer, wet tool. |
| No. 24 Landis plain, swivel head. | "A" Yankee drill grinder.           |
| No. 11 Brown & Sharpe, plain.     |                                     |

### LATHES—ENGINE.

- |                                     |                                        |
|-------------------------------------|----------------------------------------|
| 12x5 Young, comp. r., good as new.  | 20x8 Flatther, 4 step cone, belt feed, |
| 13x5 Willard, compound rest.        | compound rest.                         |
| 14x6 Hendey, plain rest, taper att. | 22x15 Pond, compound rest.             |
| 19x8 Greaves & K., good as new.     |                                        |

### MILLING MACHINES.

- |                                         |                           |
|-----------------------------------------|---------------------------|
| No. 3 Cincinnati, cone type, belt feed. | No. 1 Eynon, back geared. |
| No. 3 1/2 Garvin, plain.                | No. 2 Osterlein, plain.   |
|                                         | No. 3 Owen, plain.        |

### PLANERS.

- |                                   |                               |
|-----------------------------------|-------------------------------|
| 10 in. Busch, crank, swivel vise. | 24x24x6 Ohio, 1 head.         |
| 22x22x4 New Haven.                | 36x36x10 Cincinnati, 2 heads. |

### PRESSES.

- |                     |                 |
|---------------------|-----------------|
| No. 4 Bliss, punch. | Inclinable (2). |
|---------------------|-----------------|

### TURRET LATHES.

- |                                                      |                                                |
|------------------------------------------------------|------------------------------------------------|
| 2x24 Jones & Lamson, latest type.                    | 28 in. Gisholt, rapid traverse.                |
| 7x14 Potter & Johnston.                              | 44 in. Grant chucking lathe.                   |
| 16x5 Mueller, plain rest, turret on shear and chuck. | No. 3 Pratt & Whitney, hub forming attachment. |
| 24 in. Lodge & Shipley screw mach.                   | No. 1 Krauth & Benninghofen.                   |

### MISCELLANEOUS.

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| Belt lacer, 17 in. Peerless.        | Pneumatic gap riveter, 10x37 Ch'go. |
| Broaching mche., No. 1 vert. Stand. | Riveter, 1/2 in. Schuster.          |

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Cincinnati Planer Co.,** . . . . **Cincinnati, Ohio.**  
Second-Hand Tools—Bargains!

PLANERS.	
24x24x6 s. h. standard Cinti.....	\$ 550
30x30x14 d. h. l. p. Cinti.....	1,000
30x30x15 Cincinnati, s. h. arr. for d. h. l. p.....	1,000
42x42x16 3 heads par. drive.....	2,000
LATHES.	
18x8 Lodge and Shipley.....	\$400
18x8 Rahn-Carpenter.....	400
36x8 American chucking.....	\$400
No. 1 15x5 Drees turret.....	195
MISCELLANEOUS.	
Balancing way, No. 3 Bowsher & 25	
Cranes, hand, 5 ton, 30 ft. span without hoist, (2) each.....	250
Drill, 24 in. Cinti, upright, bk. gr., pr. fd., tapping att.....	200
Grunder, wet tool, No. 1 Safety.....	100
Hoist, 4 ton, Harrington.....	\$ 48
Hoist, 5 ton, Chisholm & M.....	55
Hoist, 8 ton Y. & T., triplex.....	80
Variable sp., No. 3 Reeves, c. s.,	20
Variable sp., No. 4 Reeves, c. s.,	30

All of the above machinery is in first-class condition. Prices f. o. b. Cincinnati.

### FOR SALE BY

**W. L. Perkins Jr. & Co.,** - 30 Church St., New York City, N. Y.

LATHES.	
12x5 Prentiss, hol. sp., r. & f. rest.	22x10 Harrington, compound rest.
12x6 Reed, hol. spdl., r & f. rest.	26x10 Pond, compound rest.
14x8 Reed, hol. spdl., r & f. rest.	28x15 Worcester, compound rest.
16x8 Harrington, plain rest.	30x17 Pond, compound rest.
18x8 Reed, for stud work.	30-40x15 Pond, compound rest.
20x8 Pond, compound rest.	34x8 Johnson, compound rest.
20x10 Standard, compound rest.	
PLANERS.	
17x17x3 Bridgeport, 1 head.	26x26x6 Putnam, 1 head.
22x22x5 Bement, 1 head.	30x26x7 Putnam, 1 head.
24x24x6 Pease, 1 head.	30x30x8 Sellers, 1 head.
SHAPERS.	
10 in. Fitchburg, traveling head.	15 in. Gould & E., crank, with vise.
14 in. Fitchburg, traveling head.	20 in. Gould & E., crank, with vise.
TURRET LATHES.	
13x5 Bardons & Oliver, plain head.	18x6 American brass lathe, set-over and swivel motion.
UPRIGHT DRILLS.	
36 in. Bement, sliding head, b. g.	
50 in. Harrington, sliding hd., b. g.	
SLOTING MACHINES.	
8 in. Bement, all feeds.	24 in. Sellers, all feeds.
12 in. Sellers, all feeds.	20 in. locomotive frame slotter, Bement, all feeds.
18 in. Bement, all feeds.	
MISCELLANEOUS.	
Axle and centering machine, 10 in. Bement, good as new.	
Boring and drilling machine, horizontal, 2 1/2 in. bar, Garvin.	
Bolt cutter, 1 1/2 in. Acme, with dies, taps, etc.	
Broaching machine, 2 1/2 in., complete, regular equipment.	
Cutting-off machine, 3 in. Pratt & Whitney, accelerated speed.	
Cylinder boring machine, 50 in. Niles.	
Engine, Corliss tandem compound, 14-26x48 in., Greene, band whl. 18 ft.x28 in.	
Gear cutter, spur, 30 in. Gould & Eberhardt, automatic.	
Grunder, surface, 24x6 1/2 in. Walker, automatic.	
Hammer, steam, single, 800 lb. Bement.	
Hammer, steam, double, 3,500 lb. Bement.	
Miller, Lincoln style, Garvin.	
Nut tapper, upright, 6 spindle, Acme.	
Pumps, Blake, Worthington, Dudley.	

C. C. V.

11x4 ft.  
12x5 ft.  
12x7 ft.  
13x6 ft.  
14x6 ft.  
14x6 ft.  
14x6 ft.  
15x5 ft.  
15x6 ft.  
16x6 ft.  
16x10 ft.  
16x11 ft.  
17x8 ft.  
18x6 ft.  
18x6 ft.

52 in. S  
7x31 in.  
60 in. S  
ing an  
4x11 ft

9x42 in.  
No. 6 B  
ing an

No. 2 A  
No. 1 A  
16 in. W  
18 in. B  
No. 2 B  
1 in. Cl  
No. 0 H  
No. 0 B  
24 in. G  
10x3 ft.  
1 in. Cl  
20 in. x

6 spindle  
14 in. G  
2 spindle  
2 spindle  
28 in. S  
22 in. E  
4 ft. Am  
32 in. C  
24 in. B  
Barker  
Knecht  
20 in. Pr

Die shap  
24 in. Ho  
24 in. Ho  
15 in. Pe  
18 in. An

19x16x3 f  
26x26x5 f  
28x28x6 f  
32x32x10  
14 ft. 6 in  
36x36x7 f



## SECOND-HAND MACHINERY

### FOR SALE BY

**C. C. Wormer Mach'ry Co., 94-96 W. Woodbridge St., Detroit, Mich.**

#### ENGINE LATHES.

- |                                         |                                    |
|-----------------------------------------|------------------------------------|
| 11x4 ft. Mahn.                          | 18x7 ft. Perkins.                  |
| 12x5 ft. Springfield, compound.         | 18x8 ft. Hendy.                    |
| 12x7 ft. Shepard, r. & f. rest.         | 18x8 ft. LeBlond, compound.        |
| 13x6 ft. Pratt & Whitney, r. & f. rest. | 18x8 ft. New Haven.                |
| 14x6 ft. Flather; Monarch.              | 18x9 ft. New Haven.                |
| 14x6 ft. Perkins.                       | 19x6 ft. Pond.                     |
| 14x6 ft. Springfield, r. & f. rest.     | 20x10 ft. LeBlond, quick change.   |
| 15x5 ft. Prentice, r. & f. rest.        | 21x10 ft. Porter, compound.        |
| 15x6 ft. Nutter & Barnes.               | 21x13 ft. Lodge & Davis, compound. |
| 16x6 ft. LeBlond, comp.; Porter, pl.    | 22x8 ft. Fifield.                  |
| 16x10 ft. Bogart.                       | 22x10 ft. Niles.                   |
| 16x11 ft. Reed.                         | 22x16 ft. Putnam.                  |
| 17x8 ft. LeBlond, compound, heavy.      | 26x22 ft. Fifield.                 |
| 18x6 ft. Jones & Lamson, r. & f. rest.  | 27x14 ft. Pratt & Whitney.         |
| 18x6 ft. Lodge & Davis.                 | 32x20 ft. Jackson & Wiley.         |

#### SPECIAL LATHES.

- |                                                                     |                                        |
|---------------------------------------------------------------------|----------------------------------------|
| 52 in. Stevens, pulley lathe.                                       | 24 in. Davis, forming & boring.        |
| 7x31 in. Stark bench, automatic.                                    | 13 in. x 4 ft. Prentice taper turning. |
| 60 in. Stevens, pulley lathe, with boring and crowning attachments. | 13 in. x 5 ft. Sebastian, on legs.     |
| 14x11 ft. single head axle lathe.                                   | 48 in. double end pulley lathe.        |
|                                                                     | 39x16 ft. column facing lathe.         |

#### SPEED LATHES.

- |                                                                     |                                   |
|---------------------------------------------------------------------|-----------------------------------|
| 9x42 in. Pratt & Whitney.                                           | 20x7 ft. Lodge & Davis, chucking. |
| No. 6 Bliss, spinning lathe, with wiring and trimmings attachments. | 12x5 ft. Diamond, with chuck.     |
|                                                                     | 12x5 ft. Lathe & Morse.           |

#### TURRET LATHES AND SCREW MACHINES.

- |                                        |                                         |
|----------------------------------------|-----------------------------------------|
| No. 2 American, cabinet, universal.    | 2 spindle W. & S., valve miller.        |
| No. 1 American 15x5 in. sq. arb., Fox. | No. 2 Foster-Kimball, pl. hd. screw w.  |
| 16 in. W. & S., plain head turret.     | No. 140 Wells, pl. hd. screw.           |
| 18 in. Bardons & O., pl. hd. turret.   | 4 in. Cleveland, auto. pl. screw.       |
| No. 2 Brown & S., auto. screw.         | No. 12 Garvin, pl. hd. screw.           |
| 4 in. Cleveland, auto. screw.          | No. 3 Hartford, automatic screw.        |
| No. 6 Brown & S., pl. hd. screw.       | 22 in. Gisholt, turret.                 |
| No. 6 Brown & S., wire feed screw.     | No. 1 Krauth & B., screw, wire feed.    |
| 24 in. Gisholt, turret, triple gd. hd. | No. 1 Pratt & Whitney, screw.           |
| 16x3 ft. Warner & S., wire feed.       | No. 2 Pratt & Whitney, pl. hd. screw.   |
| 4 in. Cleveland, automatic.            | 21 in. x 7 ft. Lodge & D., chuck'g tur. |
| 20 in. x 8 ft. Starr, chucking turret. | No. 3 Pratt & W., with auto. chuck.     |

#### DRILLS.

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| 6 spindle Woodward & R., sens.       | 10 in. Barnes, friction disc, on col. |
| 14 in. Gardam, 4 spindle.            | 10 in. sensitive, on column.          |
| 2 spindle Barr, sensitive.           | 3 spindle Barnes.                     |
| 2 spindle, style A, Fox.             | 20 in. Sibley-Ware, square base.      |
| 28 in. Snyder, sliding hd., b. gd.   | 4 spindle Foote-Burt, sensitive.      |
| 22 in. Barnes, sliding head.         | 20 in. Prentice.                      |
| 4 ft. American, plain radial.        | 24 in. sliding head, square base.     |
| 22 in. Cincinnati, sliding head.     | Binsee, horizontal boring & drilling. |
| 24 in. Bickford, quick return.       | 6 spindle Fox, sensitive.             |
| Barker Bros., style F, 17 in. swing. | 4 ft. Box, plain radial.              |
| Knecht, friction, sensitive.         | 14 in. Gardam, 3 spindle, sensitive.  |
| 20 in. Prentice, stationary head.    | 10 in. Dwight-Slate.                  |

#### SHAPERS.

- |                                        |                                      |
|----------------------------------------|--------------------------------------|
| Die shaper with chuck & tools.         | 16 in. Gould E., bk. gd. crank.      |
| 24 in. Hendy, pillar, friction driven. | 10 in. traverse head, 42 in. travel. |
| 24 in. Hendy, traverse, 60 in. travel. | 10 in. Boynton & P., traverse crank. |
| 15 in. Perkins, friction.              | 24 in. Lodge & Davis, geared rack.   |
| 18 in. American, bk. gd., crank.       | 22 in. Walcott, geared rack.         |

#### PLANERS.

- |                                     |                              |
|-------------------------------------|------------------------------|
| 19x16x3 ft. New Haven.              | 26x27x6 ft. Wheeler.         |
| 26x26x5 ft. Gray.                   | 22x22x5 ft. Pond.            |
| 28x28x6 ft. Pond.                   | 30x30x14 ft. Miles, 2 heads. |
| 32x32x10 ft. Pond, 2 heads.         | 36x36x12 ft. Fitchburg.      |
| 14 ft. 6 in. Sellers, plate planer. | 16 ft. Niles, boiler plate.  |
| 36x36x7 ft. Sellers.                | 16x16x18 in. Belden, crank.  |

## SECOND-HAND MACHINERY

### FOR SALE BY

**E. O. Partridge, 2047 W. Lake St., - - - Chicago, Ill.**

#### GAS ENGINE.

10 h. p. Backus gas engine, fitted for either gas or gasoline. Has been rebored, and is as good as new. A big bargain for somebody.

### FOR SALE BY

**W. F. Gammeter, - - - - - Cadiz, Ohio.**

Grinder, universal and tool, Greenfield.  
Natural gas forge, Stewart.  
Polishing and plating outfit, complete.  
Press, geared, No. 50 Waterbury Farrell, incline legs.  
Press, geared, No. 60 Waterbury Farrell, incline legs.  
Slitting shear, rotary, No. 208 Niagara.  
Tapping machine, No. 1 1/2 Burke.  
All in excellent condition.  
Immediate delivery.

### FOR SALE BY

**Fred. C. Dickow - - - 33 So. Desplaines St., Chicago, Ill.**

#### LATHES.

13x 5 Prentiss h. spdl., b. g. | 14x 6 Bradford, c. r., taper attach.  
14x 5 Fox, chasing bars, c. r., (3). | 15x 6 quick change gear, taper att.  
14x 5 1/2 American Fox, back geared. | 16x 8 Eagle, plain rest, \$85.

#### MISCELLANEOUS.

Band saw, 36 in. Berry & Orton. | Punch press, No. 4 Bliss.  
Brake, 6 ft., light pattern, \$50. | Shaper, 12 in. Rockford.  
Brake, cornice, 6 ft. Keene, gear att. | Turret lathe, 14 in., only \$110.  
31 in. bench brake, 30 in. sq. shear, punch and shear, tire benders.  
3 ft. power punch presses 3/4 x 3/4 in., 6 spindle turret drill press.  
No. 0 Bliss kick press, buffing and polishing machines, grinders, counters, etc.

### FOR SALE BY

**J. W. Wright & Co., - - - 2nd and Morgan Sts., St. Louis, Mo.**

#### LATHES.

11x 5 Rockford, compound rest. | 18x10 Rahn-Carpenter, comp. rest.  
13x 5 plain turret. | 19x 9 Lodge & Davis, c. r. & taper.  
16x 8 Hendey, compound rest. | 20x12 Gray, compound rest.  
16x 6 LeBlond, compound rest. | 24x12 Fitchburg, compound rest.  
16x 8 Bradford, plain rest. | 42x15, compound rest.

#### PLANERS.

15x15x36 in. New Haven. | 30x30 in. x 7 ft. New Haven.  
24x24 in. x 6 ft. Whitcomb. | 36x36 in. x 12 ft. Gray, shop worn only.  
24x24 in. x 8 ft. Pease, 2 heads. | 14 in. Steptoe, crank.

#### PRESSES.

No. 3 Swaine, foot (7). | No. 35 Swaine, power (2).  
No. 27 Swaine, power.

#### SCREW MACHINES.

No. 5 1/2 Bardons & Oliver, 3 1/2 in. capacity, A-1.  
2x24 Jones & Lamson.

#### DRILLS.

14 in. sensitive.

#### MISCELLANEOUS.

Blower, No. 2 Roots.  
Bolt cutter, double, 1 1/2 in. National.  
Cock grinder.  
Cutter grinder, Cincinnati.  
Hammer, power, No. 4 Perfect.  
Keyscater, No. 2 Davis.  
Motors, 5 h.p., a.c., 220v., 60c., 3ph. (2)  
Pipe machine, 2 in. Jarecki.  
Pulley borer, 36 in. Streit.  
Pulley lathe, 30 in. Henley.  
Tapper, 3/4 in. W. & R.

17 S. Je  
915

1in. Nati  
1in. Nati

14-20 ft. N  
2 1/2 in. Bin  
No. 1 Bar  
No. 4 Be  
No. 1 Pav

14 in. Me  
2 spindle  
ball bea  
2 spindle  
heavy p

40 in. x 9

American  
Garvin cu  
No. 6 Dia  
No. 7 Bar  
No. 3 Bro  
20 in. Bar

Williams  
150 lb. Wil

No. 2 Bal

14x6 Bradf  
14x6 Flath  
14x6 Lodg  
14x8 Bradf  
18x10 Har  
on shear

18x6 Garvi  
2x24 Jones  
3 in. Gish

No. 6 Whi  
No. 2 Eyn  
belt feed  
No. 2 Cinc  
No. 2 plain

2 in. Saund  
2 1/2 in. to 6 i

22 in. x 22 i  
26 in. x 26 i  
30 in. x 72 i

W. F. & J  
36 in. Ferra

15 in. Kelly  
16 in. Blou

## SECOND-HAND MACHINERY

### FOR SALE BY

**Marshall & Huschart Machinery Company,**  
**17 S. Jefferson St., Chicago. 334 N. Capitol Ave., Indianapolis.**  
**915 Chemical Bldg., St. Louis. 418 Railway Exc., Milwaukee.**

#### BOLT CUTTERS.

1 in. National, single head. 1 1/2 in. Adams.  
 1 in. National, double head. 2 in. Acme.

#### BORING MILLS.

14-20 ft. Niles extension.  
 2 1/2 in. Binasse horizontal, with 36 in. table.  
 No. 1 Barnes horizontal drilling, boring and tapping machine.  
 No. 4 Betts cylinder boring machine, 3 in. bar.  
 No. 1 Pawling & Harnischfeger horizontal boring and drilling machine.

#### DRILLS.

14 in. Mechanics, lever feed. 23 in. B. F. Barnes, b. g. and p. f.  
 2 spindle Henry & Wright high sp., 25 in. Barnes, w. & l. p. f. & b. g.  
 ball bearing. 26 in. Barnes sliding head, complete.  
 2 spindle style "F" Baker Bros. 26 in. Mechanics, sl. hd., complete.  
 heavy pattern. 3 ft. arm Dreses, cone drive pl. radial.

#### GEAR CUTTERS.

40 in. x 9 in. Gould & Eberhardt, Victoria type.

#### GRINDERS.

American twist drill. 20 in. Ransom water tool.  
 Garvin cutter and tool. No. 3 Diamond water tool.  
 No. 6 Diamond. 14 in. Duplex wet & surface.  
 No. 7 Ransom. No. 50 Saxon cylinder.  
 No. 3 Brown & Sharpe, universal. No. 4 Landis universal, good as new.  
 20 in. Barnes water tool.

#### HAMMERS.

Williams & White, spring. 800 lb. Ferris & Miles, single frame,  
 150 lb. Williams & White, rope drop. steam.

#### KEYSEATERS.

No. 2 Baker Bros., complete. 20 in. stroke Morton keyway cutter.

#### LATHES.

14x6 Bradford. 18x12 Hamilton.  
 14x6 Flatner, with taper attachment. 25x20 Putnam, comp. with reg. eqpt.  
 14x6 Lodge & Davis. 36-42x18 LeBlond, compound rest.  
 18x8 Bradford, with regular eqpt. 38x19 New Haven.  
 18x10 Hamilton, with hex. turret 42x18 Lodge & Shipley, pat. head.  
 on shears.

#### TURRET LATHES.

18x6 Garvin p. f. to t. 28 in. Pond.  
 2x24 Jones & Lamson, flat turret. 42 in. New Haven.  
 3 in. Gisholt.

#### MILLING MACHINES.

No. 6 Whitney, hand. No. 3 Cincinnati, plain cone type.  
 No. 2 Eynon, plain milling machine, No. 3-B Kerney & Trecker, plain.  
 belt feed. No. 4 Cincinnati, pl., all p. l., c. t.  
 No. 2 Cincinnati, plain miller. 15 in. x 8 ft. Keystone, slab.  
 No. 2 plain, Lincoln type. 2 spindle Ames profiler.

#### PIPE MACHINES.

2 in. Saunders, hand. 3 in. Saunders, complete with c. s.  
 2 1/2 in. to 6 in. Curtis.

#### PLANERS.

22 in. x 22 in. x 5 ft. Whitcomb-Blaisdell, 1 head at reduced price (new).  
 36 in. x 26 in. x 6 ft. Whitcomb-Blaisdell, 1 head, at reduced price (new).  
 60 in. x 72 in. x 16 ft. Fitchburg, with 1 head.

#### PRESSES.

W. F. & John Barnes, hand screw. No. 1 Cady.  
 26 in. Ferracute notching press.

#### SHAPERS.

15 in. Kelly, plain crank, complete. 24 in. Walter Bros., belt shifting  
 16 in. Blount, friction geared, complete. complete.

Write for specifications on above.

## SECOND-HAND MACHINERY

### FOR SALE BY

**International Watch Co.,**

**Jersey City, N. J.**

List from E. Bunzl, Treas., 313-315 Broadway, New York.

Blower, No. 6 Stillwell.  
Buffing plant.  
Drill presses, bench.  
Lathes—Sloan pinion, staff, buffing, case, bench, spring, and watchmakers.  
Spring winding machine.  
Stud and pin machine, Hartford.  
Wheel and gear cutters, Sloan & Chase.  
Wigwags, and other machinery.  
Prices ridiculously low.

### FOR SALE BY

**Buffalo Tool & Supply Co., 15 W. Swan St., Buffalo, New York.**

Cold saw, Nutter & Barnes, capacity 5 in. round, \$100.  
Drill, upright, 24 in. swing, p. l., b. g., a. s. and lever feed, \$90.  
Gear shaper, 36 in. Fellows, excellent condition.  
Keyseater, Colborne, heavy and good, \$150.  
Lathe, engine, 22x11 Lodge & Davis, p. r. and shaft, hol. spdl., \$300.  
Miller, univ., Putnam, first class, complete, \$350.  
Miller, univ., Pedrick & Ayr, heavy and good, \$600.  
Punch and shear, Long & A., 12 in. throat, capacity 1½ in. in 1 in. iron, or shear 1x5 flat, \$225.  
Wire straightener, Schuster, power, very heavy.  
Steam and gas engines, motors, generators, pattern makers' machinery.  
Drop us a card for anything needed.

### FOR SALE BY

**Frank Toomey, Inc.,**

**127 N. Third St., Philadelphia, Pa.**

#### HAMMERS AND RADIAL DRILLS.

800 lb. Bement Miles & Co., single frame hammer, 36 in. Morris radial drill.  
48 in. Gang radial drill (2).

#### LATHES.

12x6 Hendey, tool room, full eqmnt.  
17x8 Greaves-Klusman (2).  
20x9 Pond.  
20x10 Rahn-Carpenter gap lathe.  
21x12 Lodge & Davis.  
22x16 Draper.  
24x10 modern, blocked to 34 in.  
24x14 Rahn-Carpenter.  
26x14 Fitchburg.

#### MISCELLANEOUS.

Grinders, oscillating surface, Springfield No. 5 (2).  
Miller, slab, 36 in x12 ft., heavy.  
Miller, vertical, No. 22 Garvin.  
Miller, univ., No. 2 Cincinnati, vertical attachment, like new.  
Pipe machine, 8 in. Eaton, Cole & B.  
Press, PG-5 Ferracute.  
Press, No. 3 Bliss, dbl. crank, gd.  
Profiler, No. 13 Pratt & Whitney.  
Shaper, 29 in. Smith & Mills.  
Shaper, 26 in. Gould & Eberhardt.  
Turret lathes, No. 14 Garvin (2).

### WANTED BY

**E. G. Eldridge,**

**566 Washington Blvd., Chicago, Ill.  
Phone, Franklin 1022.**

I want to purchase good second-hand lathes, planers, drill presses, punch presses, milling machines and other machine tools.

#### FOR SALE.

The remaining choice machines recently purchased in Elgin.  
Send us a list of your wants and what you have for sale.

**Prent**

9x44 Sta  
12x5 Cl  
14x8 Le  
15x6 Pu  
16x6 Br  
17x6 Re  
18x8 Lo  
C. F.  
20x8 Fa  
power  
20x8 Mo  
20x10 D  
21x14 P  
24x14 N  
26x12 F  
26x13 F  
26x14 P  
cross  
27x12 P  
28x10 G

No. 2 P  
No. 2 G  
No. 3 C  
No. 4 G  
No. 4 B

Foot-  
Baker  
32 in. C  
38 in. N

15 & 20  
18 in. P

12 in. G  
30 in. G

4 in. No  
4. 4. 1.  
2x24 Jo

22x22x4  
30x30x6  
36x32x1  
36x36x8

50 lb. B

2 in. Big

Boring  
Cold sa  
Engine,  
Engine,  
Grinder  
Grinder

## SECOND-HAND MACHINERY

### FOR SALE BY

**Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse.**

#### LATHES.

9x44 Star, plain rest, p. c. f.  
12x5 Champion, comp. rest, p. c. f.  
14x8 LeBlonde, chuck.  
15x6 Putnam, c. r., p. c. f.  
16x6 Bradford, c. r., p. c. f.  
17x6 Reed, c. r., p. c. f.  
18x8 Lodge & Shipley, patent head,  
c. r., p. c. f., chuck.  
20x8 Fay & Scott, compound rest,  
power cross feed.  
20x8 McMahon, compound rest.  
20x10 Draper, c. r., p. c. f.  
21x14 Powell, c. r., p. c. f.  
24x14 Niles, c. r., p. c. f.  
26x12 Fish, compound rest.  
26x13 Fitchburg, compound rest.  
26x14 Perkins, compound rest, power  
cross feed.  
27x12 Pratt & Whitney, plain rest.  
28x10 Gleason, compound rest.

27x16 Fay & Scott, compound rest,  
power cross feed.  
30x12 Niles, c. r., p. c. f.  
32x17 Bement triple geared, com-  
pound rest.  
32x17 Bement, triple geared, com-  
pound rest, power cross feed.  
36x16 Reed, compound rest, power  
cross feed.  
37x18 Sellers, compound rest, power  
cross feed.  
38x20 Fay & Scott, compound rest,  
power cross feed.  
40x18 Newark, triple geared.  
46x38 Fitchburg, triple geared.  
84x20 compound rest, power cross  
feed.  
102x25 Bement, triple geared.  
16 in. x 10 ft. automatic threading lathe.  
60 in. Stevens pulley lathe.

#### MILLERS.

No. 2 P. & W., Lincoln pattern.  
No. 2 Garvin, hand.  
No. 3 Cincinnati, plain.  
No. 4 Garvin, manufacturers type.  
No. 4 Burke, bench.

No. 4 Becker, plain.  
No. 2 Brown & Sharpe, plain.  
No. 12 Brown & Sharpe, plain.  
No. 24 Brown & Sharpe, plain.  
No. 5 Brown & Sharpe, plain.

#### DRILLS.

Footie-Burt, high speed.  
Baker Bros. high speed.  
32 in. Cincinnati, sliding head, b. g.  
38 in. New Haven, sliding head.

No. 3 6 ft. Bickford, universal.  
54 ft. Niles, universal radial.  
30 in. Gang radial, back gears.  
10 spindle Gardam, adjustable.

#### SHAPERS.

15 & 20 in. Hendey, friction.  
18 in. Putnam, friction.

26 in. Lodge & Davis, shifting belt.  
28 in. Cincinnati, geared.

#### GEAR CUTTERS.

12 in. Gould & Eberhardt, hand.  
30 in. Gould & Eberhardt, auto.

No. 1 Whiton, spur & bevel.  
16 in. Gould & Eberhardt, spur & b.

#### SCREW MACHINES.

4 in. No. 52 National-Acme, auto.  
5, 1, 1, 1, 1 & 2 in. P. & W., auto.  
2x24 Jones & Lamson.

No. 3 2 in. Pratt & W., wire feed.  
No. 6 24 in. W. & S., wire feed.  
2x36 Jones & Lamson.

#### PLANERS.

22x22x4 Powell, 1 head.  
30x30x6 Pond, 1 head.  
26x32x12 Pond, 2 heads.  
26x36x8 Pond, 2 heads.

33x33x8 Betts, 1 head.  
48x42x8 Farrell, 1 head.  
48x48x15 Pond, three heads.  
15 ft. plate planer.

#### HAMMERS.

50 lb. Bradley, compact.

600 lb. Erie, steam.

#### PIPE MACHINES.

2 in. Bignall & Keeler.

3 in. Jarecki.

#### MISCELLANEOUS.

Boring mill, 10 ft. Pond.  
Cold saw, 24 in. Newton.  
Engine, gas, 8 h. p., Fairbanks.  
Engine, steam, 8x10 in. 1 de.  
Grinder, plain, 12x42 Landis.  
Grinder, surface, Walker.

Grinder, disc, 18 in. No. 4 Besly.  
Pipe machine, 6 in. Merrill.  
Profiler, 1 spindle, Garvin.  
Slotter, 13 in. Bement.  
Slotter, 16 in. Bement, crank.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Chicago House Wrecking Co., W. 35th and Iron Sts., Chicago.**

#### NEW AND USED MACHINE TOOLS.

Cold saw, Bryant.	Pipe threader, $\frac{3}{4}$ to 2 in., Jarecki.
Drill press, power, 20 in., sq. base.	Pipe threader, $1\frac{1}{2}$ to 6 in. Jarecki.
Drill press, power, 42 in., sq. base.	Pipe threader, 2 to 12 in. Jarecki.
Hoisting engine d. d., 12x5 Lidget-wood.	Pipe threader, 1 to 6 in. Curtis.
Lathe, screw cutting, 13 in. x 8 ft.	Planer, 60x60 in. x 22 ft. Niles, 4 hds.
Lathe, screw cutting, 24 in. x 10 ft.	Radial drill, Universal, 4 ft. arm.
Lathe, screw cutting, 36 in. x 12 ft.	Radial drill, Gang, $4\frac{1}{2}$ ft. arm.
	Rock crusher, 9x15 in. Allis-Chalmers.

#### STEEL TANKS.

1000 gallon capacity (12).	5000 gallon capacity (37).
1500 gallon capacity (22).	4500 gallon capacity (42).
2500 gallon capacity (30).	6000 gallon capacity (150).

Send for Special List No. 889. Free on request. 40 'phones, all Yards 1900.

### Second-Hand Wood-Working Machinery.

For a large list of used wood-working machinery, consult **The Machinery List**, a publication similar to this but devoted to the advertising of saw-mill and woodworking machines. A copy may be had on application to the publisher, **A. H. Hitchcock, 1220-1235 Caxton Building, Chicago, Ill.**

## THE LODGE & SHIPLEY MACHINE TOOL CO.

**Second-Hand Machine Tools  
For Sale at Bargain Prices.**

#### LATHES.

One 24 in. x 8 ft., 5 step cone head, quick change gear, Lodge & Shipley Engine Lathe.  
Two  $3\frac{1}{2}$  in. x 60 in. Fitchburg Lo-Swing Lathes.  
One 2x24 in. Jones & Lamson Flat Turret Lathe.  
One No. 3 Lodge & Shipley Rapid Reduction lathe, with 8 ft. bed.

#### PLANERS.

One 36x36 in. x 10 ft., 3 head, Sellers.  
One 36x36 in. x 26 ft., 4 head, Sellers.  
One 42x42 in. x 20 ft., single head, Putnam.

#### MISCELLANEOUS.

One Whiton Revolving Centering Machine.  
One Franklin Cold Saw,  $3\frac{1}{2}$  in. capacity.  
Two No. 3 Nutter-Barnes Cold Saws, 6 in. capacity.  
One No. 2 Higley Cold Saw, 6 $\frac{1}{2}$  in. capacity.  
One Schuster  $\frac{1}{2}$  in. Riveter, Model "A."  
One Mumford 12x40 in. power ramming Molding Machine.  
One Globe Power Hack Saw, 8 in. capacity.  
One Universal Power Hack Saw, 6 in. capacity.

**The Lodge & Shipley Machine Tool Co.  
CINCINNATI, OHIO, U. S. A.**

# **For Sale**

**At very attractive prices, the following machine tools, of our own make, from our equipment:**

Heavy Roughing Lathe, 3-step cone and double friction back gears, 16-ft. bed, pan and pump, with heavy double roughing carriage that will take 10 in. in diameter between front and rear tools; cone diameters 23, 20 and 17 inches, for 5 in. belt. Suitable for heavy forge and roughing work.

18x 8 Standard Double Friction Back Geared, with turret on carriage.

20x10 Standard, with turret on shears, with power feed.

24x10 Quick Change Double Friction Back Geared, with turret on shears and power feed.

16x 6 Standard, with compound rest and taper.

16x 6 Quick Change, with compound.

18x 6 Back Geared Stud Lathe, with compound rest.

20x 8 Standard, with compound rest.

20x10 Quick Change, with compound rest.

20-28 in. Plain Chucking Lathe.

No. 0 Plain Miller, power feed to table.

No. 3 Plain Miller, power feed to table.

No. 3 Plain Miller, heavy design, single pulley drive, with power feeds in all directions.

The above should not be confused with the ordinary run of second hand tools, as they will be thoroughly overhauled and re-aligned before shipment, and are only sold to be replaced by our Heavy Duty line of tools.

*Write for prices*

**The R. K. LeBlond Mche. Tool Co.**  
**Cincinnati, Ohio**

**Iron and Steel**  
**Shop Furniture**  
**For Every Purpose**



NOW'S THE TIME to make  
your shop snug and tidy.

Some shops cannot use our whole  
line of shop furniture at any time.

But all shops can be run better  
with some of it all the time.

What does *your* shop need—now?

*May we send you our book?*

**The New Britain Machine Co.**  
60 Chestnut St., NEW BRITAIN, CONN.



